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MONEY AND BANKING

MONEY AND BANKING

BY

FREDERICK A. BRADFORD, PH.D.

PROFESSOR OF ECONOMICS

AND HEAD OF THE DEPARTMENT OF FINANCE

LEHIGH UNIVERSITY

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SIXTH EDITION

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PREFACE

The present revision of my *Money and Banking* has been undertaken with two aims in view. The first is the usual purpose of a revision, namely, to bring the text up to date. This has involved the incorporation in the text of a considerable amount of pertinent new material. Specifically, in this connection, Chapter 15 has been considerably extended to include a more detailed discussion of consumption loans than was formerly included plus a consideration of term loans which did not appear in the previous edition. A new section on the income approach to the problem of the value of money has been incorporated in Chapter 25, and Chapter 27 has been largely rewritten to take account of the wartime monetary and financing policies of World War II in their relation to the value of money. Finally, Chapter 31, dealing with the Monetary Fund and the International Bank is an elaboration and extension of the very brief treatment accorded these institutions in the Appendix to the previous edition.

The second purpose of this revision has been to effect a rather extensive reorganization of the material presented in an effort to make the text more useful from a teaching standpoint. To this end, the text has been divided into eight parts as follows:

- | | |
|-----------|------------------------------|
| Part I | Nature and Functions |
| Part II | Historical Development |
| Part III | The Banking Process |
| Part IV | Commercial Banking Problems |
| Part V | The Value of Money |
| Part VI | International Exchange |
| Part VII | Monetary and Credit Policies |
| Part VIII | Non-commercial Banking |

Certain comments on this arrangement appear pertinent.

In opinions on and criticisms of previous editions of the text which have come to my notice, some instructors are very favorably inclined toward the rather large amount of historical material included in past editions while others consider this a defect, feeling that the historical chapters are largely if not entirely superfluous. Because of this division of opinion, the purely historical chapters have been segregated in the revision in Part II, in order that those not desiring to cover monetary and banking history may omit that part of the text entirely. This has necessitated the introduction of a new chapter—The Banking System of the United States—at the beginning of Part III, which presents a bird's eye view of the existing banking structure without reference to its historical antecedents.

It is also hoped that the present arrangement will permit the satisfactory use of the text in certain courses where an over-all coverage of the subject is not intended. In a course devoted primarily to banking, for example, Parts I, III, IV, and possibly VIII could well be used as text material, Chapters 24 and 25 in Part V could also be assigned if a brief treatment of the value of money was wanted. Where it is desired to stress the monetary aspects of the subject, on the other hand, Parts I, V, VI, and VII plus Chapters 11, 12, 16, and 17 in Part III could readily be used as a basis for text assignments. In either case, the pertinent historical chapters could be assigned or omitted, depending upon the desire of the instructor in this connection.

As in previous editions, I wish to acknowledge my indebtedness to Dr. Neil Carothers for permission to quote from *Fractional Money* in Chapter 5, as well as for much personal assistance in the original preparation of that chapter. Appreciation is also accorded to the Cleveland Trust Company for permitting the reproduction of two charts in Chapter 27 from the Cleveland Trust Company's *Business Bulletin* and to Prentice-Hall, Inc., for permission to quote from Enke and Salera's *International Economics* in Chapter 30. The Research Council of the American Bankers Association, the Federal Reserve Banks of New York and Philadelphia, the Guaranty Trust Company of New York, N. Y., and the Bethlehem National Bank of Bethlehem, Pennsylvania,

have also kindly permitted the reproduction of certain forms and figures appearing at different points throughout the text. The Division of Research and Statistics of the Board of Governors of the Federal Reserve System has also been most helpful. Many of the excellent charts in the text have been taken from the monthly chart book published by the Board.

I wish to thank my colleague, Professor E. C. Bratt, for helpful suggestions, comment, and advice on parts of Chapters 24 and 25. Thanks are also extended to my student assistant, Mr. Walter H. Ayers for his very material assistance in getting the manuscript of this revision in shape for the publishers.

The publishers have furnished me with a complete list of criticisms, errors, etc., which they had obtained from various instructors and from other sources. Many of these have proved most helpful in revising the text, and I wish to express my thanks for the assistance thus rendered.

FREDERICK A. BRADFORD

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PART I

NATURE AND DEVELOPMENT

CHAPTER 1

THE NATURE AND FUNCTIONS OF MONEY

Introduction.—Money resembles any other mechanism because it attracts little attention when it is functioning properly, but is a source of much irritation when it is not. Perhaps this is the chief explanation of a long-standing interest in the subject, for the world has suffered intermittently from currency disturbances since the money machine first came into general use. The problem that confronts the student of money is to determine how this essentially simple and indispensable piece of economic machinery can be made to operate smoothly in the best interests of society. In order to do this it will be necessary to study in detail the relation of different kinds of money to each other and the relations between money and goods. Before beginning this task, however, we must decide just what is meant by money, why it is essential to the operation of the economic system, and what functions it may properly be expected to perform. The present chapter will be devoted to a survey of these elementary characteristics of money.

THE NATURE OF MONEY

A definition of money.—The chief purpose of money is to act as a medium of exchange. In any developed economic system in which the production and distribution of goods are left largely to individual initiative, most of the people are engaged in producing goods and services they do not themselves want, but that they expect to exchange for goods and services, produced by others, that they do want. In these circumstances, some common medium is essential by which these necessary exchanges can be effected.

In primitive communities, where the inhabitants are largely self-sufficient and only occasionally have surplus products to exchange for something else, barter—the direct exchange of

goods for goods—may be used to a limited extent. Even under such simple conditions, however, attempts at barter are likely to encounter difficulties. To illustrate, suppose a farmer has a cow he wishes to trade for some wheat and potatoes. One of his neighbors may have wheat and potatoes, but may not want a cow. Another neighbor may want a cow and also may have some wheat to exchange for it, but no potatoes. Unable conveniently to divide the cow, and unable to find anyone who wants a cow and has both wheat and potatoes to exchange for it, our farmer cannot effect a trade. This illustrates the two chief difficulties of exchange by barter, namely, a lack of *coincidence* or *mutuality* of wants of the two parties wishing to effect an exchange, and a lack of *divisibility* in the case of the more valuable goods to be exchanged. Moreover, even when exchange by barter is possible, there is no real *market* and hence no *single price* for the goods that are being exchanged. Each pair of traders must strike their own bargain, and the one who is most anxious to effect the exchange is practically certain to be worsted.

Obviously, as soon as the economic system has developed beyond the primitive stage, almost no exchange by barter is possible. The producer exchanges his goods for some common medium which he then uses to obtain other goods. This common medium of exchange, whatever may be used for the purpose, we shall call money. It will be seen later, however, that the use of money as a medium of exchange naturally leads to its service in certain other capacities. We shall therefore take these other services into account in defining money as follows: *Money is anything that is used primarily as a medium of exchange and that, because of this use, performs certain other useful functions.*¹ In this definition the word *primarily* deserves special emphasis. If a man exchanges a bicycle for fifteen bushels of apples and later exchanges these apples for a suit of clothes, he has made use of the apples as a medium of exchange, but this would not entitle apples to

¹ Compare this with Professor Taylor's definition of money: "Money is something which is specially designed for, and devoted to, serving as a medium of exchange, although it is also put to other uses for which it is specially fitted either because of its being a recognized medium of exchange or because of the nature of the substance from which it is made." *Some Chapters on Money*, p. 11. These definitions, while similar, differ in scope, Professor Taylor's being somewhat less inclusive than the one given in the text.

inclusion under the head of money unless they were primarily devoted to this use, which would certainly not be the case since very few people would be willing to take apples in exchange for other goods unless they wanted them for consumption purposes.

Desirable characteristics of money.—In the preceding paragraph it was stated that apples could not be considered as money because they would not be readily accepted in exchange for other goods except by individuals who actually wanted the apples themselves. Only comparatively few people want apples at any particular time, and those desiring them want only a limited quantity, whereas a medium of exchange, to be widely used, must possess general acceptability, i.e., it must be readily accepted by practically *everyone* in exchange for other goods or services. *Acceptability*, then, is the all-important characteristic of a satisfactory medium of exchange and really covers the other characteristics that a desirable sort of money should have.

Other characteristics of money are significant mainly to the extent that they increase its acceptability. The most important of these other characteristics are: (1) portability, (2) durability, (3) homogeneity, (4) divisibility, (5) cognizability, and (6) stability of value. Ability to carry money about, or transport it easily, clearly adds to the readiness with which it will be accepted, for such things as carpets—which possess some of the necessary attributes of money—could scarcely be used as a medium of exchange because of their bulk and clumsy form. The fact that eggs break easily and are subject to decay would prevent their ready acceptance even if they possessed all the characteristics mentioned above except durability. Another objection to eggs is that they are not strictly homogeneous, some eggs being much larger, and of better quality, than others. Money must also be divisible to be acceptable. Houses and locomotives could not well be used as money because, among other things, they cannot be divided into fractions and used to obtain other goods of less value than they themselves possess. Unless money can be easily recognized as such, it will prove difficult to persuade people to accept it in exchange for their own goods or services. Some precious stones, for example, have a number of desirable

characteristics of money, but the difficulty, on the part of the layman, in distinguishing between real gems and imitations would probably preclude the wide use of such jewels as money. The problem of preventing the counterfeiting of money is one which has never been entirely solved, but the solution is much less difficult when money is distinctive in appearance and easily recognized by the majority of people. Finally, the knowledge that a given amount of money will remain relatively stable in value increases its acceptability, for the recipients are then sure that they may hold the money for some time if they so desire without taking the risk of any great depreciation in its value.

Up to this point the discussion has been concerned with the general nature of money and its more important characteristics. In the following section we shall turn our attention to the services money performs in the economic community.

THE FUNCTIONS OF MONEY

Money as a medium of exchange.—The general nature of the service performed by money as a medium of exchange has been described, but certain points in connection with the performance of this function need emphasis. In a barter transaction there is but one step. Farmer Brown exchanges five bushels of wheat for half a ton of Farmer Smith's hay, and the transaction is completed. If money had been used in the same transaction, the number of steps involved would have been increased to three. (1) Wheat would have been exchanged for money; (2) the money would have been held for a longer or shorter period; and (3) the money would then have been exchanged for hay. The first and third of the steps require no further mention, but the second merits some added discussion. It is plain that one of the advantages incidental to the use of money is the ability to defer the second part of the exchange transaction (step 3) until such time as it becomes convenient or desirable to use the money to obtain other goods. The farmer who sells his wheat for money may not want hay for several months and, if the money is of the proper sort and is stable in value, he will find it much more convenient to retain his claim to

wealth in the form of money than to buy the hay immediately and hold it until he wishes to use it.

In the example just given, the holding of money for a few months by the farmer who had sold his wheat was merely a convenience to him, and, in itself, would not produce any far-reaching results. If, however, a great many people in the community decide, for some reason, to hold a larger proportion of their incomes than usual in the form of money, or to hold the accustomed proportion for a longer time than usual, or to do both of these things, the economic effects of such action may be decidedly significant. A detailed treatment of this aspect of money exchange must be postponed to a later chapter (Chapter 25). For the present we shall merely note the significance of the second step in the use of money as a medium of exchange, i.e., the holding of money for an indeterminable period until it is desired by the holder to spend it for goods, and pass on to a consideration of certain other functions of money, which are largely derived from its use as a medium of exchange.

Money as a measure of value.—Since money has to have value to act satisfactorily as a medium of exchange, it naturally takes on the added function of serving as a measure of the values of all other economic goods. If, under a barter régime, a man who has a surplus of wheat finds that he can exchange 3 bushels of wheat for (*a*) 1 crate of eggs, (*b*) 6 bushels of corn, (*c*) 1 hat, or (*d*) 2 bushels of apples, he would then consider a bushel of wheat to be worth $\frac{1}{3}$ of a crate of eggs, or 2 bushels of corn, or $\frac{1}{3}$ of a hat, or $\frac{2}{3}$ of a bushel of apples. From the point of view of the seller of eggs, a crate of eggs would be worth 3 bushels of wheat, 6 bushels of corn, 1 hat, or 2 bushels of apples. Now all of this is very confusing and gives us no clear idea of the economic values of any of the commodities in question. Each party to an exchange of the sort mentioned naturally thinks of the value of the goods he disposes of in terms of that of the goods he receives, but he must change his measuring stick from eggs to corn to apples, etc., in each of his various transactions. If now, instead of measuring the value of each commodity in terms of each other commodity for which it

may be exchanged, the value of each commodity is referred to some one thing, we shall have an understandable measure of the values of different goods. Since money, in acting as a medium of exchange, is the one thing for which practically all goods are exchanged sooner or later, it will almost inevitably be chosen as the thing in terms of which the values of all other goods will be measured. The situation is greatly simplified. In our illustration, if wheat is worth 1 dollar a bushel, eggs will be worth 3 dollars a crate, corn $\frac{1}{2}$ dollar a bushel, hats 3 dollars each, and apples $1\frac{1}{2}$ dollars a bushel.

The measurement of values by means of money is thus not essentially different from the measurement of any property or characteristic. In measuring a door for a screen, a yardstick divided into feet and inches will be used. The measurements are then recorded and an order may be sent for the amount of screening needed. The hardware dealer, having a similar yardstick, will be able to cut the screening in the proper dimensions, so that it will be sure to fit the door, without his having seen the door at all. Without the convenience of this common measure—the yardstick—the owner of the house would have had to measure the length and breadth of the door with a piece of string, a stick, or some other object, and then take or send these pieces of string or wood to the hardware dealer to use in cutting the screen. The yardstick, then, offers a common measure of length, known to all, and greatly simplifies the measurement of different lengths and makes them understandable.

In like fashion, the monetary unit, which is used by all as a medium of exchange, furnishes a common measure of the heterogeneous values of goods and services. A farmer, for example, may have an old-style automobile he wants to sell to a man from the city. The latter, upon inquiring what the farmer thinks the machine to be worth, receives the reply that he values it at about three small heifers. The city man, knowing nothing of heifers or of their probable worth, is as much in the dark as ever. If told, however, that the machine is worth \$60, he will immediately know where he stands, for he knows how much of the things he is accustomed to buying can be purchased for \$60 and is, therefore,

able to come to some decision regarding the purchase of the automobile.

In most cases, the use of money as a measure of value is simply incidental to its use as a medium of exchange, for whenever a good is exchanged for money it will naturally be valued in terms of the money received for it. Similarly, when goods are exchanged directly, each party to the exchange is likely to value the goods given in terms of those received. The man who exchanges 3 bushels of wheat for 1 crate of eggs, naturally measures the value of each bushel of wheat at $\frac{1}{3}$ of a crate of eggs. Consequently, the measure of value function of money may seem to be co-terminous with its medium of exchange function, but in some instances money may serve in the former use without acting as a medium of exchange. A certain individual with, let us say, a desk wishes to exchange this directly for a friend's bookcase. They compare values. The owner of the desk thinks it is worth \$65, while his friend believes his bookcase to be worth \$75. If they are agreed on the relative value of the two articles, the man owning the desk offers, perhaps, to throw in a dictionary worth \$10, and the trade is made. Such instances, while relatively few in number, occur with sufficient frequency to warrant our consideration of the measure of value function of money as separate from its medium of exchange function.

Other functions of money.—Certain other functions of money that arise out of its use as a medium of exchange should receive mention. Most important among these, perhaps, is the use of money as a *guarantor of solvency*. Every business has certain claims against it that can be settled only in money, the latter having generalized purchasing power and hence being satisfactory to all in the settlement of claims. All business concerns have claims against others also, at practically all times, and they expect these to be paid in money. The receipts from the collected claims may furnish the exact wherewithal to meet the money payments that have to be made. But no business concern dares to rely upon such a balancing of receipts and expenditures at all times. Payments to others must be made, dollar for dollar, while expected receipts may not materialize in full. Further, even

when receipts come in as expected, they probably will not coincide exactly with payments at any particular time, and unlooked-for contingencies may arise from time to time that can be met only by a money payment.

For all these reasons, every business of any consequence feels the necessity of keeping a certain proportion of its assets in the form of money at all times. A strong cash position, as the term goes, adequately insures the ability of an enterprise to meet its debts as they come due, and thus to maintain solvency. It is undesirable to retain too large a proportion of assets in the form of cash, for such procedure reduces income. The proper balance between safety and profit must be struck and this balance will vary from time to time with the condition of business in general and with other factors. Consequently, the amount or proportion of assets kept in the form of money varies considerably from one time to another, and we shall see later that this factor has an important bearing on the determination of the value of money. At this point, however, we are mainly concerned with the function money performs in preventing insolvency by insuring business enterprises of the necessary means to meet their legal obligations when they fall due.

Money may also be used as a *storer of value*. A satisfactory medium of exchange is stable in value, and this characteristic permits money to serve as a means of storing up value for indefinite periods. Under modern secure conditions this is merely a part of the medium of exchange function, money being held for indeterminate periods before it is spent largely as a matter of convenience. At times in the world's history, however, when property has been subject to seizure by the ruling authorities, or to theft by robbers and marauders, or to destruction by invaders, money has played an important part as a storer of value. Gold and silver coins having a high value per unit of bulk and being extremely durable, could be hidden easily for as long a time as necessary. Used in this sense, the storer of value function of money is distinct from its medium of exchange function, but this is a distinction of little importance in modern civilized countries.

Another, and relatively unimportant, function of money is

that of serving as a *gift medium*. This is not an exclusive function of money, but the fact that money has the property of universal or generalized purchasing power makes it a highly desirable medium to use for this purpose. A person very often wishes to remember someone, but has no idea just what the individual has or would like to have. The easiest solution of the problem is to send money as a gift, so that the recipient may make his own choice and select what will be most useful or pleasurable to him in view of the size of the gift.

Finally, the use of money as a medium of exchange has led to its recognition and use by governments as a *legal* means of payment, both of private debts and of public duties, fines, penalties, and taxes. The latter are one-sided payments in which the individual receives no specific benefit in return for the money given to the government, but merely shares in the general benefit that the government confers upon the group as a whole. As such, they are akin to gifts as far as their relation to the medium of exchange function of money is concerned. That is, the purchasing power embodied in the money is transferred to the state, and the state is then enabled to use it in the manner most convenient to obtain the goods and services incidental to running the government. Thus the state can satisfy its wants more efficiently than if it extracted goods and services directly from the taxpayers, since the latter are frequently unable to furnish either the goods or the services that the state is likely to require.

Money as a loan medium and standard of debt payments.—The functions of money as a *loan medium* and a *standard of deferred payments* have frequently received considerable emphasis. These functions, however, follow naturally from the use of money as a medium of exchange and are scarcely to be distinguished from the latter. Money acts as a loan medium simply because it is the recognized medium of exchange. The borrower of money can use the proceeds of the loan to purchase the goods or services he wants to acquire, while he would find it difficult, indeed well-nigh impossible, to borrow these goods directly.

That money performs no distinctive or peculiar service in acting as a standard of debt payments has been well demonstrated by Professor Taylor as follows:²

First, money surely cannot be the standard of debts or contracts in general but only of money debts. That is, money obviously cannot be the standard of a promise to deliver 10,000 bushels of wheat or 500 cords of wood or 1500 barrels of apples. The standard for the wheat contract must be some sort of wheat, for the wood contract some sort of wood, for the apple contract some sort of apples. The statement, then, can have no other meaning than that money forms the standard of *money contracts*. But, secondly, to say that money constitutes the standard of *money contracts* is little short of absurd. If it means anything, it is a mere identical expression. To say that a contract is a money contract is to say that money determines the thing which must be delivered, and so is to say that money is the standard of this particular contract.

Borrowers prefer to borrow money rather than goods because great difficulties are thereby avoided. Creditors prefer to receive payment in money for the same reason. The difficulties avoided are the same as those that impede exchange by barter, and the preferences of debtors and creditors are directly attributable to the general acceptability of money in exchange for goods. It should be obvious, therefore, that the performance by money of the offices of loan medium and standard of debts is purely incidental to its use as a medium of exchange.

THE IMPORTANCE OF MONEY

Advantages.—The various functions of money that have just been discussed show clearly the advantages of a money economy over one conducted by means of barter exchange. Under barter, practically no development of specialization and division of labor is possible, while the use of money permits a high degree of development along these lines. It is not necessary to dwell here upon the advantages that society derives from the widespread division of labor, specialization of machinery, and large-scale production that characterize our present economic system, advantages familiar to every student of elementary economics. It is necessary, however, to sound a note of warning against attributing these advantages too fully to the use of money. An oiling system

² *Some Chapters on Money*, p. 29.

is essential to the satisfactory operation of a motor car, yet one would hardly ascribe all the advantages of the automobile to the existence of its oiling system. The motor, gears, wheels, and other parts must be available and ready to render service if the oiling system is to be of any use. In the same fashion, a wide market for goods, an efficient transportation system, and other factors are essential parts of any highly developed exchanging order.

The analogy may be carried a step farther. The advantages to be derived from a given kind of automobile result *largely* from the efficiency of its motor and the perfection of its technical construction. Given these things, a satisfactory oiling system is necessary to insure smoothness of operation, but no oiling system, however perfect, is capable of making a good automobile if its motor, gears, or axles are not serviceable. So it is with our exchanging economic order. The main advantages of such an order are attributable, in large part, to the breadth and steadiness of the markets for which goods are produced and the efficiency of the systems of transportation, marketing, and communication, as well as the efficiency of the factors of production. Given satisfactory conditions along these lines, and a sound monetary system will tend to make the economic order function smoothly by facilitating exchanges, or, in terms of our analogy, by "oiling the wheels of trade."

Disadvantages.—In considering the disadvantages attendant upon the use of money, a similar attitude of caution must be maintained. A bad monetary system will hamper trade just as a poor oiling system will interfere with the efficient operation of a motor car. If business is unduly restricted because the amount of money available is too small, or if speculative tendencies are unduly aggravated by a plethora of money, or if borrowed money is put to improper uses because of questionable credit policies on the part of the banking system, it is then highly advisable to direct attention to the monetary system in an effort to eliminate the difficulties that have arisen. On the other hand, one would hardly attempt to place the blame for the dissatisfaction with one of the early models of a certain car at the door of that car's oiling system when the trouble was

quite obviously to be traced to a defective rear axle. The manufacturers replaced the troublesome axle with a new one and greatly improved the car. Such a step was entirely logical. Yet, in connection with our economic troubles, there is a decided tendency to adopt a less logical attitude and to advocate some change in our monetary arrangements as a remedy for any and all economic disturbances.

The analogy that has been drawn between a motor car and the present-day economic system may, no doubt, be carried to extremes. Nevertheless, the comparisons are, in the main, sound. Money is an instrument that performs a most useful service and, as such, its place in the economic system deserves careful attention. It is not to be supposed, on this account, that money alone is responsible either for all the advantages or for all the drawbacks of present-day economic society. An unsound monetary system will doubtless result in grave economic disorders which may, in turn, be ameliorated by improving the exchange mechanism of the country. On the other hand, when the money mechanism is sound, relief for economic difficulties must be sought in other channels. A study of the principles of money is important in that it enables us to distinguish between disturbances that arise from an unsound system of money and those that have their origin in other sources.

Before proceeding with a detailed examination of the principles and practices connected with the use of money and credit, we shall conclude this chapter with a brief discussion of the origin and development of money.

THE ORIGIN AND DEVELOPMENT OF MONEY

Commodity money.—In the primitive stages of economic development, various commodities have at times been used to perform the more important functions of money. The commodity chosen to serve in this capacity was one that was widely used in the community in question and that had as many of the desirable characteristics of money as possible. Thus, skins appear to have been used as money by non-tropical hunting races; oxen and sheep by peoples in the pastoral state; and tea blocks, coconuts, cocoa beans, dates, sugar, corn, wheat, and tobacco among agricultural peoples in

various geographical locations. Dried fish have been used in a monetary capacity by certain more or less isolated fishing communities. Among manufactured articles, linen, strips of cotton, shirts, wax cakes, javelins, and straw mats have served similarly in various parts of the globe. In the way of minerals, salt tablets and various raw metals have been resorted to upon occasion.³

There may well be some question whether all the commodities mentioned in the preceding paragraph should really be classed as money in view of the services they performed. It is probable that some of them, particularly the skins and oxen of the early stages of social development, served chiefly as measures of value and were used only sporadically as media of exchange. Be that as it may, it is safe to assert that no great economic development could well have taken place without the use of a more highly satisfactory type of money than any of those just described. Certainly, nothing that even faintly resembled a monetary *system* could be said to exist until some instrument was actually *designed* for use as a medium of exchange.

The metals as money.—Historically, such designed instruments of exchange have usually put in an appearance with the coining of money from the metals, although the metals in uncoined form were used as exchange media long before coining became common. The coinage of metals developed early in the Mediterranean region, silver pieces being issued in Ægina about the middle of the eighth century B.C., while coins of gold, electrum, and copper were also used in this territory at early dates. Silver coins were first struck officially by the Romans in 268 B.C., and the first issue of gold coins occurred about 240. Bronze coins had been in use in Italy, however, since the latter part of the fourth century B.C.⁴

From these early, and very simple, monetary systems (if such they may be called), the intricate and highly efficient arrangements of the present day have developed. While

³ For an annotated account of primitive forms of money, see Roscher, *Political Economy*, Book II, Chapter III, Sec. CXIX, text and footnotes, especially footnote 12; and Jevons, *Money and the Mechanism of Exchange*, Chapter IV.

⁴ See Burns, *Money and Monetary Policy in Early Times*, Chapter VI, for a complete and careful discussion of the materials of early currencies.

copper and bronze coins are still in use, their appearance in modern monetary systems seems to have followed the use of silver,⁵ and for many years the leading commercial countries have employed silver or gold or both metals as a basis for their monetary systems. Some isolated countries have used other metals as money because of their availability, but silver and gold have predominated among highly developed peoples since the time of the Romans.

The choice between gold and silver seems to have depended partly on their relative values and partly on the preferences of the peoples concerned. The Germans used silver as a basis for their monetary system prior to 1870, the laws of 1871-1875 placing that country, legally, upon a gold standard.⁶ England adopted a full gold basis as early as 1816, but preceded the other leading nations of Europe in so doing. France was legally on a bimetallic basis (silver or gold) from 1803 to 1878, while, from the formation of the Latin Monetary Union in 1865 until 1878, Switzerland, Belgium, and Italy—the other members of the original Union—as well as France, had, theoretically at least, a bimetallic standard.⁷ From 1878 on, the majority of the leading countries of Europe were on a gold standard, although silver coins were retained in use in their monetary systems.⁸

Reasons for the adoption of gold and silver.—The reasons for the widespread adoption of gold and silver as money are to be found in the excellent money characteristics these metals possess. Both metals have a high value in relation to their bulk, which makes possible the manufacture of coins of convenient sizes, i.e., coins that have the characteristic of *portability*. These metals are also malleable, so that the attribute of *divisibility* may be readily attained with their use as money. Both gold and silver are very *durable*, especially when alloyed with small quantities of other metals, for they are not subject to any marked deterioration upon exposure to air as are some metals, such as iron. They are

⁵ Roscher, *op. cit.*, Book II, Chapter III, Sec. CXIX, footnote 3.

⁶ *European Currency and Finance*, Vol. I, p. 387.

⁷ For a complete account of the Latin Monetary Union, see Willis, *A History of the Latin Monetary Union* (Chicago, 1901).

⁸ The situation in the United States will be treated in Chapter 5.

homogeneous also, for gold and silver can vary only in degree of purity. There are neither different kinds of gold nor different kinds of silver. As to *cognizability*, the metals have characteristic lusters that are easy to distinguish, and their malleability permits them to be minted into coins that are readily recognized by all. Lastly, both metals are much sought after for purposes of ornament or other use and, being relatively scarce, they thus acquire a high unit value. Further, because they are in the nature of luxuries rather than necessities, and because they are very durable (so that the annual production constitutes but a trifling portion of the total stock), they have a *stability of value* greater than that of most other goods. In stability of value, gold surpasses silver. Gold also contains a greater value per unit of bulk than does silver, so that it is more conveniently handled when payments of large size have to be made. It is, perhaps, these two points of superiority—particularly the first—that have resulted in the final choice of gold by the majority of advanced nations as the basis for their monetary systems.

Paper money.—One other type of money that has developed in conjunction with the use of gold and silver and that plays an important part in modern monetary systems is paper money. Its characteristics will be dealt with later. For the present, we shall merely note that it is, as a rule, more convenient to use than metallic money, and that its use frequently, though not always, results in an economy in the amount of gold or silver that is necessary for the proper functioning of the monetary system. Paper money was widely used in China as early as the twelfth century,⁹ and it has found extensive use in the form of bank notes for over a century in practically all civilized countries.¹⁰

In connection with the evolution of paper money, as also with the other sorts of money already described, it must be remembered that its development has been closely related to the state of civilization in various countries and at different times. The ancient civilizations in China and the Mediter-

⁹ *The Travels of Marco Polo*, Chapter XXIV, footnote (New York, 1926).

¹⁰ "It was left, however, for the sixteenth century of our era to develop the bank note in something like its modern form, and for the nineteenth century to spread its use over the civilized world." Conant, *A History of Modern Banks of Issue*, p. 1 (New York-London, 1927).

anean region had more advanced monetary systems than those of the Dark Ages hundreds and even thousands of years later, while at present there are tribes of natives who still use beads and trinkets as money, and undeveloped or isolated peoples who still make use of some commodity in this capacity. We are not particularly concerned with either the ancient monetary systems or the present crude exchange methods of certain peoples and regions. Rather, we shall concentrate our attention upon the characteristics of modern monetary systems typical of advanced countries. To this end, we must first obtain a clear notion of the attributes of such a typical system.

The characteristics of the typical monetary system.—The monetary system of the modern advanced country comprises *the entire group of arrangements whereby exchanges of goods and services are mediated and the monetary needs of the country provided for*. This group of arrangements may, for purposes of study, be naturally and conveniently divided into two parts which include (1) the governmental aspects, and (2) the banking aspects, of the monetary system. Under the former head, we shall consider the standard of value, the denomination system, provisions relating to legal tender and coinage, and the various kinds of money coined or issued by the government. The matter considered under the second head will relate to bank notes and the check system. It is part of the subject matter of commercial banking and, as such, will be discussed in subsequent chapters (Chapters 11 and 12). The following chapter will be devoted to a treatment of the governmental phases of the monetary system.

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CHAPTER 2

MONETARY STANDARDS AND SYSTEMS

Introduction.—The most important feature of the modern monetary system is the standard of value under which it operates. By the beginning of the twentieth century, the majority of the countries of the world had adopted the gold standard. There was a widespread departure from gold as a standard of value during World War I, followed by a general return to this standard during the third decade of the century after the termination of hostilities.

The great depression, however, forced a large number of countries off gold once more and other nations have since followed suit. The result is that no country today maintains a gold standard as the term was formerly understood, although it appears that some of them still contemplate a possible return to gold in the more or less distant future.

The question of the standard, therefore, has assumed a large significance. The problem of whether to return to the gold standard or to attempt some other arrangement is by no means a matter of mere academic interest, but has a very real practical importance. It is out of the question to try to reach a decision on this matter without a thorough analysis of the principles governing the value of money, the control of credit, and international exchange. Accordingly, the discussion in this chapter will be devoted to the characteristics and requirements of the various standards of value that have been resorted to in the past or proposed for the future, leaving to a later chapter the decision concerning the best course to pursue.

THE STANDARD OF VALUE

The role of the standard of value in the monetary system.—The service of money as a general measure or standard of value has been described in some detail in the preceding

chapter and requires no further elucidation at this point. It is necessary, however, to indicate the nature of the part played by the standard of value *within the monetary system*. Its chief function in this connection is *to fix the value* of all the different kinds of money used in the system. The performance of this function may be accomplished by (1) *incorporating* the standard of value in the money itself, or (2) *redeeming* or *converting* the moneys of the system in the standard of value, without any restriction on the uses to which the standard of value, so obtained through redemption, is put. It is also essential that the standard of value be freely convertible into the moneys of the system at will.

Prior to World War I, modern countries as a rule had resorted to a combination of both the preceding methods, embodying the standard of value in one kind of money and then providing for the conversion of all other moneys of the system, directly or indirectly, into the money containing the standard. After World War I, however, when the countries of Europe returned to a gold basis, it became the practice of some countries not to coin money freely from the standard metal. The central banks of England and France, for example, were alone given the right to have gold coined at the mint, and were required to redeem their notes, not in gold coin, but in specified amounts of bullion.¹

Under this plan, the owner of the gold bullion who wished to obtain money sold his bullion to the central bank for notes or deposit credits instead of taking the gold to the mint for coinage. Thus the value of the moneys of the system was fixed by that of the gold into which they might be converted, even though the gold itself was not coined into money.

Another function of the standard of value is to *settle balances* in international trade. Until relatively recently, most of the advanced countries of the world had adopted gold as a standard for reasons already noted and gold, as a result, formed an acceptable medium for making international payments. The money of one country, in the ordinary run of events, is not acceptable to the people of foreign na-

¹ At the present time, both England and France are off the gold standard and the central banks of these countries are not required to redeem their notes in either gold coin or bullion.

tions. But gold, when the basis of their own monetary systems, is readily acceptable in the form either of bullion or of coin. They will not use the latter directly as money, but since it contains the standard of value, they will accept it and have it restamped into the coin of their own country. This is proved by the fact that it is acceptable by weight only and not by tale or count. It is not the money, but the standard of value contained in it, that makes gold acceptable in the payment of foreign balances, so that this function belongs to the standard of value per se when an international gold coin standard is in operation.

It is also worth noting that, at the present time, when but few countries have even a semblance of a gold standard, gold continues as a means of settling international balances. The fact that, for a great many years, gold has served in this capacity probably explains its continued use despite the fact that the gold standard has largely been abandoned. It is also interesting to note that the currencies of the countries belonging to the International Monetary Fund are based on specified weights of gold, and that the Fund may buy the currency of any member country with gold at any time.

Possible different standards.—Although gold has occupied the leading position as a standard of value for highly developed commercial countries since the last quarter of the nineteenth century, other standards have been widely used at times while still others have been suggested for the future. It seems advisable, therefore, to describe here the requirements necessary to the maintenance of these various standards. The most important types of systems, classified according to the standards of value that have been either used or suggested are (1) monometallism, (2) bimetallism, (3) symmetallism, (4) the paper standard, (5) managed currency standards, and (6) the multiple commodity reserve standard. We shall consider these systems in the order named.

MONOMETALLISM

The gold coin standard.—Under a monometallic standard, the value of the moneys of the system must be kept equal to the value of a given weight of a single metal. Since by far the most common type of monometallism is the gold

standard, the bulk of this section will be devoted to a discussion of the possible forms of this standard of value. The first of these is the gold coin standard.

To maintain a gold coin standard the government must accept gold freely at the mint for coinage in unlimited quantities, the gold coins being returned to the parties who have brought the gold to the mint. Since the amount of gold contained in a coin is fixed by law, the free coinage of gold by the mint sets a lower limit on the price of gold as no one would sell gold in the market for less than the amount of gold coins that could be obtained at the mint.

If the mint levies a charge to cover the cost of coinage, the mint and market prices of gold may diverge by an amount equal to this charge. Moreover, if the mint will not exchange new coins for bullion immediately, but instead coins the actual bullion presented, the parties bringing the gold to the mint will have to wait a number of days until the new coins are made. In this case, the mint and market prices of gold may diverge by an amount equal to the loss of interest on the money involved during the coinage process.

If, however, the mint absorbs the cost of coinage and maintains a bullion fund from which coins are struck in advance, so that gold bullion brought to the mint may be immediately exchanged for gold coins, the lower limit of the price of gold will be identical with the mint price. To illustrate, if the law states that the money unit, which we may call a dollar for convenience, shall contain 24 grains of fine gold, and if gold coins can be obtained immediately without charge in exchange for bullion at the mint, the price of gold cannot go below \$20 per ounce (one ounce contains 480 grains) since an ounce of gold can always be turned into \$20 in gold coin at the mint.

The second requirement of the gold coin standard is that there shall be no restriction on the melting of gold coin for non-monetary uses or for export to foreign countries. If this requirement is adhered to, the upper and lower limits of the price of gold will be identical and the price of the metal will then be absolutely fixed. The reason for this is that no one will give more for gold than can be obtained by melting

gold coin. To refer to the previous illustration, if \$20 in gold coin can be turned into an ounce of gold bullion by melting, naturally no one will be inclined to give more than \$20 per ounce for gold in the market. There may be a slight discrepancy since the melting of the coin contains an element of expense, but it will not be great.

Needless to say, if moneys other than gold coin are in use, they must be freely redeemable in gold coin if the values of all the moneys of the system are to be kept equal to the value of a specified weight of gold. If this is done, however, the value of the gold in the money unit and the value of the moneys of the system will be identical and a full gold coin standard will be maintained.

The gold bullion standard.—As noted in an earlier paragraph, after World War I a number of countries did not reopen their mints to the free coinage of gold upon returning to the gold standard. Instead they provided that their central banks should buy gold bullion or bars with central bank notes and should redeem these notes on demand in gold bars of specified weight. Thus Bank of England notes, in the period 1925–1931, were redeemable in gold bars of 400 ounces. It was accordingly possible to obtain gold in exchange for money at a fixed price, although it was not possible to redeem small notes of £1 and 5s. denominations in gold. Since, when gold is needed for use in the arts or for export, it is wanted in substantial amounts, the limitation of the redemption privilege to 400 ounce bars does not serve to bring about a divergence between the official and the market selling prices of gold.

So long, then, as a country will exchange some kind of money for gold bullion at a fixed price and in turn redeem this money in gold bars at the same price, there can be no divergence between the value of the moneys of the system and the value of the gold in the money unit. Clearly the result is the same as under a gold coin standard except that gold coin does not circulate within the country. At times, as in England before 1931, and, at present, in the United States, the official buying price of gold is slightly less than the official selling price. In such circumstances, there may be a slight variation in the market price of gold, but if it is

rigidly held within narrow limits, the country is still said to maintain a gold standard.

The gold exchange standard.—A third variation of the gold standard is known as the gold exchange standard. Under a full gold exchange standard, the moneys of the country are not redeemed in gold coin or bullion, but in drafts payable in gold in some foreign gold standard country. As a result, although gold can be exchanged for the money of the country at a fixed price, it is impossible to turn the money into gold on the spot except by the payment of a premium equal to the cost of shipping gold from the foreign gold standard country to the country on the gold exchange standard.

The price of gold in a gold exchange standard country may vary, therefore, by an amount equal to the cost of importing the gold. Nevertheless, these limits are rigidly fixed and relatively narrow, so that it is really the value of a given weight of gold that fixes the value of the moneys of the country.

Following World War I, a partial gold exchange standard system was adopted by a fairly large number of countries. These countries, however, maintained only a part of their reserves in the form of foreign exchange, the remainder being in gold. In such instances, if gold was wanted for use in the arts it could be obtained at a fixed price for that purpose. On the other hand, if the gold was needed for export, the central bank had the option of redeeming its notes in a draft payable in gold in a foreign center. Under this arrangement, the value of the gold in the money unit fixed the value of the other money as closely as in a gold coin or gold bullion standard country.

The silver standard.—Theoretically, the considerations applying to the gold standard would apply equally well to the silver standard. That is, there might be silver coin standards, silver bullion standards, and silver exchange standards resting on the same bases as their gold counterparts. In practice, however, there has been no silver standard country since China departed from that standard in 1935, and the question of the silver standard is hence one of mere theoretical interest without practical significance.

BIMETALLISM

Requirements of a bimetallic standard.—The bimetallic standard exists in a country when either of two metals, gold and silver, can be freely coined at the mint at a fixed ratio to one another and when coins of either gold or silver are made full legal tender in the payment of debts. It is also essential that no restrictions be placed on the melting or exportation of either gold or silver coins. It is also theoretically possible to have a bimetallic bullion standard, in which case silver certificates would be given for silver bullion and gold certificates for gold bullion at a fixed ratio, the certificates being redeemable in silver or gold bars on demand.

In practice the bimetallic standard, in its long and interesting historical experience, has always been on a coin rather than a bullion basis. In the following discussion of the operation of bimetallism, therefore, the free coinage of gold and silver will be postulated.

Gresham's law.—The monetary principle that applies most widely to the operation of the bimetallic standard is known as Gresham's law and is formulated, in its simplest terms, in the statement "Bad money drives out good." The name "Gresham's law" has resulted from the association of the principle with the statements of Sir Thomas Gresham, financial agent for Queen Elizabeth, who pointed out that the debasement of the coinage by the sovereign, while it would leave in existence two kinds of coins of the same nominal value but of unequal weight, would not result in the concurrent circulation of both kinds of coins, for the heavier coins would be shipped abroad (where they would be accepted only by weight), while the lighter ones alone would remain in domestic circulation.² It must not be thought, however, that Gresham was the first to observe the working of this monetary principle simply because his name has been associated with the law by later writers. Nicole Orêsmé gave a precise and accurate statement of the principle in his

² "It may please your Majesty to understand, that the first occasion of the fall of the exchange did grow by the King's Majesty, your late father, in abasing his coin from vi ounces fine to iii ounces fine. Whereupon the exchange fell from xxvii. vii. d. to xiii. s. i. d. which was the occasion that all your fine gold was conveyed out of this your realm." Sir Thomas Gresham on the Fall of the Exchanges; Bland, Brown, and Tawney, *English Economic History: Select Documents*, p. 416

treatise on money in 1364,³ and a recognition of the action of such a law is to be found in Aristophanes' *Frogs*, in the latter part of the fifth century B.C.⁴

Simplest statement of Gresham's law misleading.—The simple statement that "bad money drives out good," which has been termed Gresham's law, is both inaccurate and misleading, as it stands, and needs considerable remodeling. In the first place, in most of the cases to which Gresham's law is applied, bad money does not mean money that is counterfeit or undesirable per se, but rather money that has an exchange value in some connections less than that of the money driven out of circulation. Secondly, if the principle is to work out fully in practice, both the so-called bad and good moneys must be legal tender. Thirdly, the good (i.e., the more valuable) money is not really driven out of circulation, but is rather enticed out by the possibilities of profit in putting it to other than domestic monetary use. Lastly, if the less valuable money is not present in sufficient quantity, it will not cause the more valuable money to disappear from circulation entirely, but will simply displace a part of it, the more valuable money continuing in circulation to some extent, although only at a premium.

Having now noted the more important defects of the simplest statement of Gresham's law, we may formulate the principle in a manner less open to objection:

If two moneys of the same nominal value are legal tender in the payment of debts and a discrepancy occurs between their exchange values in any connection, the money with the higher exchange value will commonly disappear from circulation or will circulate, if at all, only at a premium.

The reasoning in support of this principle is simple. Since both moneys are legal tender, one is as good as the other in the payment of money obligations. It follows that if one of the moneys comes to have a higher exchange value in some other connection than it has as domestic money, it

³ "That if the fixed legal ratio of the coins differs from the market value of the metals, the coin which is underrated entirely disappears from circulation, and the coin which is overrated alone remains current." *Tractatus de origine, natura, jure, et mutationibus monetarum* (Paris). See Wolowski's edition (Paris, 1864). Quoted from Laughlin, *The Principles of Money*, p. 420.

⁴ *Ibid.*, Laughlin, p. 420.

will be profitable to use this money in the connection in which it will bring the greatest return. Hence it will tend to disappear from circulation, since the cheaper money, being legal tender, is equally qualified to make all domestic payments. If, however, the less valuable money is not available in sufficient quantities to perform the money work of the country, the money that has the greater exchange value in some other connection may continue to appear in circulation as money, but it will circulate only at a premium that is sufficiently high to keep it from being put to other uses.

Gresham's law and the bimetallic standard.—It is a well-known fact in history that countries operating under a bimetallic standard have frequently experienced difficulty in keeping both silver and gold coins concurrently in circulation. If the fixed ratio at which the metals were accepted for coinage at the mint (the mint ratio) diverged to any significant extent from the market ratio between the two metals, one or the other of the metals would become of more value as bullion than as money and would disappear from circulation. To illustrate, suppose that the mint puts 15 times as much by weight of silver into a silver dollar as it puts of gold into a gold dollar, so that the mint ratio of gold to silver is 1:15, but that on the market for bullion one ounce of gold will exchange for 16 ounces of silver, so that the market ratio between the two metals is 1:16. Under such conditions, the mint overrates silver in relation to gold (i.e., treats silver as worth more than it really is on the market) and it becomes profitable to use the gold for other than domestic monetary purposes, with the result that it tends to disappear from circulation. Conditions like these actually existed in the United States following the year 1810, and the precise method by which gold was withdrawn from circulation at that time has been so clearly explained by Professor Laughlin that we shall quote the following paragraph from his writings:⁵

The operation of Gresham's law is in reality a very simple matter. If farmers found that in the same village eggs were purchased at a higher price in one of two shops than in the other, it would not be long before they all carried their baskets to the first shop. Likewise, in regard to gold

⁵ *The History of Bimetallism in the United States*, pp. 26-28.

or silver, the possessor of either metal has two places where he can dispose of it—the United States Mint, and the bullion market; he can either have it coined and receive in new coins the legal equivalent for it, or sell it as a commodity at a given price per ounce. If he finds that silver in the form of United States coins buys more gold than he could purchase with the same amount of silver in the bullion market, he sends his silver to the Mint rather than to the bullion market.

Laughlin then states that, by 1810,

... the market value of silver relatively to gold had fallen to 1:16, while at the Mint the ratio was 1:15. That is, in the market it required sixteen ounces of silver to buy one ounce of gold bullion; but at the Mint the Government received fifteen ounces of silver and coined it into silver coins which were legally equivalent to one ounce of gold. The possessor of silver thus found an inducement of one ounce of silver to sell his silver to the Mint for coins, rather than in the market for bullion. But as yet the possessor of silver had only got silver coins from the Mint. How was he to realize his gain? Will people give the more valuable gold for his less valuable silver coins? To some minds there is a difficulty in understanding how a cheaper dollar is actually exchanged for a dearer dollar. This also is simple. The mass of people do not follow the market values of gold and silver bullion, nor calculate arithmetically when a profit can be made by buying up this or that coin. The general public know little about such things, and if they did, a little arithmetic would deter them. These matters are relegated by common consent to the money-brokers, a class of men who, above all others, know the value of a small fraction and the gain to be derived from it. Ordinary persons hand out gold or silver, when they are in concurrent circulation, under the supposition that the intrinsic value of gold is just equal to the intrinsic value of silver in the coins, according to the legal ratio expressed in the coins. If, under such conditions, silver falls as above described, the money-broker will continue to present silver bullion at the Mint, and the silver coins he receives he can exchange for gold coins as long as gold coins remain in common circulation—that is, as long as gold coins are not withdrawn by every one from circulation. Having now received an ounce of gold in coin for his fifteen ounces of silver coin, he can at once sell the gold as bullion (most probably melting it, or selling it to exporters) for sixteen ounces of silver bullion. He retains one ounce of silver as profit, and with the remaining fifteen ounces of silver goes to the Mint for more silver coins, exchanges these for more gold coins, sells the gold as bullion again for silver, and continues this round until gold coins have disappeared from circulation. When every one begins to find out that a gold eagle will buy more of silver bullion than it will of silver dollars in current exchanges, then the gold eagle will be converted into bullion and cease to pass from hand to hand as coin. The existence of a profit in selling gold coins as bullion, and presenting silver to be coined at the Mint, is due to the divergence of the market from the legal ratio, and no power of the Government can prevent one metal from going out

of circulation. Like the farmers with their eggs, under the operation of Gresham's law silver will be taken where it is of the most value (the United States Mint), and gold will be sold where it brings a greater value than as coin (the bullion market).

Illustrations of the operation of Gresham's law.—That the monetary experience of the United States furnishes one example of the operation of Gresham's law under a system of bimetallism is evident from the foregoing quotation. Since we shall trace the monetary development of this country in a later chapter, however, the particular case of the United States is merely mentioned in the present connection. Among other nations, the experience of France under the bimetallic standard is a case in point. France adopted the bimetallic system in 1803, with a mint ratio of 1:15½. At the time of the adoption of this system, the ratio mentioned seems to have come close to coinciding with that which obtained in the market. Very shortly, however, the value of silver began to fall relatively to gold, with the result that the mint ratio, before very long, overrated silver, and gold largely disappeared from circulation. The situation again changed about the middle of the century. The tremendous increase in gold production at that time lowered the value of gold relatively to silver and, the mint ratio of 1:15½ being retained, gold came to be overrated at the mint and silver coin (including subsidiary silver) began to disappear from active circulation.

In 1865, France joined with Belgium, Switzerland, and Italy to form the Latin Monetary Union, under the terms of which uniform coinage laws were adopted by the contracting nations. The fineness of subsidiary silver coins was reduced from .900 to .835, in order to prevent their disappearance from circulation, but free and unlimited coinage of both gold and silver in the larger denominations at a ratio of 1:15½ was adopted by the members of the Union. This ratio at first overrated gold, so that the practical result of the system was a single gold circulation, although legally the free coinage of both metals was permitted. Shortly after 1870, however, the situation changed for a third time. Silver fell in value relatively to gold and the mint ratio of 1:15½ came to overrate silver. The action of Gresham's law would

shortly have resulted in the disappearance of gold from circulation, had not the members of the Latin Monetary Union prevented this by first limiting, and finally (in 1878) discontinuing entirely, the coinage of silver in the larger denominations.

According to Mr. Jevons,⁶

The most extreme instance [of the action of Gresham's law under bimetallism] which has ever occurred was in the case of the Japanese currency. At the time of the treaty of 1858, between Great Britain, the United States, and Japan, which partially opened up the last country to European traders, a very curious system of currency existed in Japan. The most valuable Japanese coin was the kobang, consisting of a thin oval disc of gold about 2 inches long, and $1\frac{1}{4}$ inches wide, weighing 200 grains, and ornamented in a very primitive manner. It was passing current in the towns of Japan for four silver itzebus, but was worth in English money about 18s. 5d., whereas the silver itzebu was equal only to about 1s. 4d. Thus the Japanese were estimating their gold money at only about one-third of its value, as estimated according to the relative values of the metals in other parts of the world. The earliest European traders enjoyed a rare opportunity for making profit. By buying up the kobangs at the native rating they trebled their money, until the natives, perceiving what was being done, withdrew from circulation the remainder of the gold.

International bimetallism.—It is thus clear that, historically, the bimetallic standard has not proved satisfactory. It has, in practice, resulted in alternating periods of silver and gold monometallism, without the advantages of either. It should be noted, however, that there is one set of circumstances in which bimetallism would work. If all the leading countries of the world adopted this standard and all maintained the same mint ratio, the mint prices of gold and silver throughout the world would fix the market prices of the two metals and no divergence between the mint and market ratio would be possible. The great difficulty is, of course, to obtain any general international agreement to adopt the standard and maintain uniform mint ratios throughout the world.

Symmetallism.—A variation of the traditional bimetallic standard is known as symmetallism. A country would be on a symmetallistic standard if its money were redeemable in gold

⁶ *Money and the Mechanism of Exchange*, v. 84. Also quoted in Laughlin, *The Principles of Money*, p. 423.

and silver in specified proportions. Such a system differs from bimetallism in that the standard of value would be gold *and* silver instead of gold *or* silver. If standard coins were minted, they would contain both gold and silver alloyed in a certain definite proportion. If not, the moneys of the country would be redeemable in so much gold plus so much silver in the designated proportion. A legally authorized symmetallic standard has never been tried in modern times, but suggests a substitute for the monometallic or bimetallic standards.⁷

MANAGED STANDARDS

The paper standard.—In the past, when a country that had been on a metallic standard issued paper money with full legal tender powers and refused to redeem this money in the standard metal (or metals) as formerly, it was said to be on a paper standard since the paper money issued by the government was irredeemable in any metal or other good of any description. Under the conditions usually surrounding the issuance of irredeemable paper money, the value of the money unit fluctuates (usually depreciates) so rapidly that the paper standard can scarcely be considered as a *standard* of value at all. A number of authorities in recent years, however, have become strong advocates of paper standards under which the amount of money is carefully controlled. A variety of plans have been proposed, but, as they all have more or less the same end in view, they may be considered together under the head of the commodity standard.

The commodity standard.—The system employing the commodity standard would aspire to maintain the moneys of the system at an equality of value, not with some single commodity, but with a whole bill of commodities. The standard of value would then be the value attaching to eggs plus milk plus wheat plus corn plus potatoes plus other designated goods in certain specified proportions. As it would be obviously impossible to redeem the moneys of the system at any time in the goods themselves, the value of the money would have to be kept equal to that of the bill of goods by

⁷ Alfred Marshall suggested resort to symmetallicism (which he termed the true bimetallism) in his testimony before the Gold and Silver Commission in 1887-1888. See *Official Papers by Alfred Marshall*, pp. 27 ff. The electrum coins used in ancient times were, of course, symmetallic. Burns, *op. cit.*, p. 139.

so regulating the *quantity* of money that a given unit would always purchase the same total value of such goods as were employed in the designation of the standard. Among the advocates of this type of standard there is little agreement on the number and character of the commodities to be employed as well as on the exact means for securing equality between the value of the group of commodities and the moneys of the system. These matters cannot be discussed intelligently, however, until the principles governing the value of money have been considered at a later point.

The compensated gold standard.—A hybrid standard, fundamentally of the commodity type, but clothed in some of the less important habiliments of the gold standard, is what may be termed a compensated gold standard. Under this system, the moneys of the country would be redeemable in gold, but the weight of gold in the money unit would vary with variations in the value of a bill of goods. Thus, if the average or total value of the bill of goods should rise by, say, 5 per cent, the weight of gold in the money unit would be increased by the same percentage, and vice versa. The alleged advantage of this type of standard over the straight commodity standard is that the people of the country would enjoy the certainty of being able to redeem their paper money in gold bars, although the amount of gold that could be obtained from a given quantity of money at any time in the future would, of course, be problematical.

THE MULTIPLE COMMODITY RESERVE STANDARD

Nature of the proposal.—A plan for a type of standard different from any of the preceding was proposed in the 1930's and gained considerable support. Very briefly, its idea was to have the Treasury or central bank issue money certificates against the deposit of warehouse receipts for staple products stored in accredited warehouses. The products so stored were to consist of those staples that are dealt in on organized commodity exchanges. To obtain money certificates, warehouse receipts for all the products in the list were to be presented in specified proportions, the proportions to be determined by the trend of the relative amounts of the products consumed in a normal period of years, or by some similar

method. The money certificates were to be redeemable at any time in warehouse receipts for the stored products in the proportions specified.

This multiple commodity reserve plan, as it was termed by its adherents,⁸ reminds one of the colonial Virginia tobacco certificates amplified to include a substantial number of commodities instead of one. It was felt that the greater number of commodities behind the money certificates would lead to a more stable monetary unit than one backed by any single commodity, whether gold or something else. The theory of the proposal was appealing, but many practical difficulties had to be surmounted before such a plan could be put into operation. Such a proposal might be attempted at some time in the future, but does not seem practicable at present.

Having described the characteristics and requirements of the chief types of standards that have been used in the past or proposed for the future, attention must next be directed to certain other aspects of the monetary system.

THE DENOMINATION SYSTEM

The need for a system of denominations.—In order to overcome that difficulty of barter which arises out of the indivisibility of the larger and more valuable goods to be exchanged, it is essential that money be divisible. Of course, the difficulty could be solved by having money of one denomination only which would be equal in value to the smallest article a person would be likely to wish to buy, but such a plan would require the use of a tremendous number of units of money and would be highly inconvenient in making large purchases. Try to imagine the disutility of having to pay, or receive payment, for a house and lot in cents only, and the inexpediency of such a simple system becomes obvious. It is for the purpose of preventing such an unhandy situation, while still permitting small payments to be made conveniently, that a denomination system must be established.

The monetary unit.—The basis of the denomination system is the monetary unit. This is the primary denomination—"that denomination which is thought of as *funda-*

⁸ This plan was sponsored in the 1930's by the Committee for Economic Stability, New York City, and is elaborated in *Storage and Stability* by Benjamin Graham.

mental in the system, the other denominations being referred to it in defining their value.”⁹ In a gold standard country, the value of the primary unit is fixed by law as a certain weight of gold of a specified fineness, which is given a definite name. The monetary unit of the United States, for example, is called a dollar; of France, a franc; of England, a pound; and of Germany, a mark. Since the monetary unit is a unit of value, it is really the value of the specified weight of gold, rather than the gold itself, that constitutes the unit. It is more convenient, however, to refer to a given unit of value as so many grains (or grams) of gold, and no harm is done so long as the real meaning is understood.

There is no *necessary* connection between the name of the monetary unit and its gold value at different times. The name of the unit is usually retained even though its gold value has been changed as a result of legislation altering the gold content of the unit or because of a temporary resort to the so-called paper standard in time of emergency. Following World War I, for example, when Germany was not redeeming her paper money in gold, the gold value of the mark, as measured in the money of the United States, reached a point below 0.000000000025 cent,¹⁰ although it had been worth 23.82 cents before the war. After 1923, through a process of virtual repudiation, the gold value of the mark was restored to its prewar figure.

Other denominations.—The precise value of the monetary unit (providing it is left unchanged) is a matter of indifference so long as various multiples and fractions of this unit are made available for the convenience of the public in making payments of varying sizes. The fractional denominations are necessary for making change and for purchasing cheap commodities, so that this type of money is used almost entirely in hand-to-hand circulation. The monetary unit and, perhaps, its smaller multiples (depending upon the value of the unit) are used both in circulation and in the reserves of the banks, while a predominant proportion of

⁹ Taylor, *op. cit.*, p. 35.

¹⁰ *Foreign Exchange Quotations and Curves*, Commission of Gold and Silver Inquiry, United States Senate, graph 9 (Washington, 1924).

the larger multiples of the monetary unit is retained in the reserves of financial institutions, since they are too large to be of use for ordinary circulation purposes.

In deciding the specific denominations to be used, other than the monetary unit itself, the majority of modern nations have favored the use of the decimal system in which the fractional denominations are designated as so many tenths or hundredths of the monetary unit, while the larger denominations are in multiples of ten or fractions of such multiples. Thus, in France, 100 centimes equal one franc and, before World War I, coins of 20 centimes, 50 centimes, and 1, 2, 5, 10, 20, 50, and 100 francs were provided for. The advantage of the decimal system lies in the ease of calculation and bookkeeping on a decimal basis, as contrasted with the non-decimal denomination system of England where 4 farthings equal 1 penny, 12 pence equal 1 shilling, 20 shillings equal 1 pound, and 21 shillings equal 1 guinea.

LEGAL TENDER

The nature of legal tender.—In addition to legal provisions for a standard value and a denomination system, the monetary laws also specify precisely the legal tender privileges attaching to each of the various denominations and kinds of money issued. By legal tender is meant *a right extended by law to certain types of money that makes such moneys valid in the payment of debts, provided that there is no contract or agreement to the contrary*. The refusal of a creditor to accept money with such legal tender powers when tendered to him in the exact amount of the debt relieves the debtor of all obligations to pay interest from the date on which payment was tendered. Such refusal, however, does not cancel the debt itself, but prevents the creditor from obtaining damages from the debtor for non-payment. The purpose of legal tender provisions is simply to enable the courts to determine, in disputed cases, whether or not a satisfactory offer of payment has been made in an unqualified money contract. This does not mean that legal tender is invariably, or even frequently, used in the payment of debts, for some other type of money may be more convenient to both creditor and debtor. Nevertheless, when there are several different

types of money in use, and when most contracts call for payment in money without specifying any particular kind of money, it is almost inevitable that the law should designate the kind (or kinds) of money that shall be deemed legally satisfactory in the fulfillment of such obligations.

In the broadest sense, legal tender applies to all debts, public and private, and such full legal tender powers are usually conferred only upon standard coin, or such government or central bank notes as are secured by a substantial percentage of standard coin or bullion. Legal tender powers that are limited to specified payments or amounts are also, at times, bestowed upon some other types of money.

The granting of legal tender powers tends to make money more acceptable than it might otherwise be, for it gives the recipient the power to use such money, once he has received it, in the discharge of any or all of his obligations. In the case of gold coin this is not of great importance, since such money embodies the standard of value itself, but if some less valuable money that is not redeemable in gold is made full legal tender, it has a tendency to stay in circulation when it would not otherwise do so and will therefore tend to displace the full-bodied money.

COINAGE

Coins and mints.—Before proceeding with a discussion of the different kinds of money ordinarily in use, it will be well to consider the nature of the machinery by means of which these moneys are brought into being. In the case of metallic money, the laws of the country typically provide for the manufacture of coins by the government. A coin is *a piece of metal of specified weight and fineness, stamped with some particular design, and made with a view to its use as money.* Although coins of a given type always contain a specific amount of metal, they are regarded not as so much metal, but as so much money. Formerly, for example, a person receiving a ten-dollar gold piece did not give a thought to the fact that he was getting 232.2 grains of gold, his interest being in the coin as a piece of money and not as a certain weight of metal. This is as it should be, for it would be a great inconvenience to have to weigh metal each time it

changed hands as a medium of exchange, but in order to make such weighing unnecessary, it is imperative that all coins of a given kind be alike. The necessity for coins that are uniform in weight and fineness and that are easily recognized as money has led to the coinage of metallic money exclusively by the government in all advanced countries, and the monetary laws of these nations provide for the establishment and operation of mints for this purpose.

Coinage terms and practices.—It is not intended, in a work of this sort, to enter into any discussion of the history or the technique of coinage. A few terms frequently used in connection with the coinage of money should be explained, however, as well as some of the principles and practices commonly followed.

Coins are not ordinarily made from the pure metal, but are alloyed with some other metal or metals in order to give them greater strength and general durability for circulation purposes. There need be no fixed ratio of pure metal to alloy in every case in order to manufacture a satisfactory coin, and the ratio actually used is likely to be the result of long-standing custom, international agreement, or mere chance. The gold coins formerly minted in the United States contained 900 parts of pure gold and 100 parts of alloy, and were consequently said to be nine-tenths fine, while the gold coins of England contained 916.67 parts of pure gold out of 1000 and were hence eleven-twelfths fine. The difference in the fineness of the United States and the English gold coins was consequently relatively slight and either type of coin is perfectly satisfactory from the standpoint of technique. The majority of commercial nations, nevertheless, adopted coins of a fineness of nine-tenths, and this particular ratio was to be recommended on the grounds of international uniformity.

The same fineness that is used in the making of the gold coins may or may not be adopted for fractional coins. These are ordinarily made from silver, or one of the baser metals, and are not used in international payments, so that the exact degree of fineness is a matter of no great moment. Subsidiary coins, for reasons to be discussed later in the chapter, are made short in weight (i.e., they have a greater value as

money than as metal), and this may be accomplished by (1) decreasing the fineness of these coins, or (2) using the same fineness as in the gold coins and decreasing the amount of metal used in their manufacture. The former method was adopted by France in 1865, when the fineness of the silver subsidiary coins was reduced from .900 to .835, and the latter by the United States in 1853, when the weight of the fractional silver coins was decreased although the old fineness of .900 was retained.

When a country adopts a given metal as a standard of value and coins that metal, the coinage of it is always free and usually gratuitous. The distinction between these two terms is as follows: A country is said to have *free coinage* if anyone is allowed to bring the standard metal to the mint and have it turned into coin at a cost not greater than the cost of minting. If the cost of minting is passed on to those bringing the metal to the mint, the coinage—though free—is not gratuitous. If, however, the mint absorbs the cost of coining the metal, the coinage is free and *gratuitous* as well. It should be clearly understood that the levying of a small charge to cover the actual cost of minting does not interfere with the freedom of the coinage, so long as anyone having bullion may take it to the mint, pay the minting charges, and receive the coined metal in return.

The aforementioned charge, which just covers the cost of minting the coin, is known as *brassage*. At times, as in the case of subsidiary coins, the government may put into the coins a smaller value of metal than the face value of the coins. When this is done, the government buys the metal used and has the coins minted from it. Such procedure is known as *coinage for government account* or *limited coinage*, as contrasted with the free coinage already mentioned. When the government pays out such short weight coins it receives a profit resulting from the short value of the metal in them. This profit is called *seigniorage*, and represents the difference between the metallic value of the coins and their face or money value less *brassage*.¹¹ Since the total of

¹¹ Strictly speaking this is *net* seigniorage. The unqualified term is more commonly, yet somewhat less accurately, used to denote gross seigniorage—i.e., the entire difference between the metallic and face values of the coin.

such coins forms but a small percentage of the total amount of money used in a modern country, the revenue to the state from this source is not great.

Another practice of importance when a country is on a gold coin standard consists of fixing *limits of tolerance*. There are two types of tolerance. The first consists of a small percentage of error allowed in the striking of coins at the mint. The second is an allowance for abrasion of the gold coins in circulation.

The first of these types of tolerance is necessary because it is impossible to obtain absolute accuracy in minting coins. Tolerance as an allowance for abrasion, on the other hand, is a device for preventing deterioration of the gold coinage. Acceptance of all gold coins at their face value by the banks and the government tends to encourage the clipping and sweating of these coins.¹² If coins are received by weight only, however, people tend to sort out the heavy, new coins in making payments to the government and banks, and the rest of the gold circulation tends to deteriorate progressively. By allowing a slight loss of weight from abrasion, while yet accepting gold coins below this limit by weight only, the sorting out of absolutely new coins may be prevented and the coinage may be maintained in a satisfactory state.

In the actual minting of the coins, certain rules should be observed. First, the coins should be of a proper size. Jevons mentions certain eighteenth-century coins in Sweden that were $7\frac{1}{2}$ inches square and weighed $3\frac{1}{2}$ pounds. These were obviously of such unwieldy proportions as to make them absurd. On the other hand, the United States discontinued the coinage of the gold dollar in 1890, because it was so small as to be highly inconvenient. Second, in addition to convenience of size, coins should be made in such a fashion as to discourage clipping and counterfeiting. Clipping is prevented by milling the edges of the coins or by inscribing a legend along their edges. The milled edge, together with an intricate design, also helps to prevent counterfeiting by making imitation of the coins difficult.

¹² An historical example of this is to be found in the English experience under William III. In spite of drastic penalties, the coins of the day were regularly clipped and sweated until the government refused to receive them in payments except by weight.

Lastly, the coins should be stamped with a design, easily recognized and as attractive as possible.

The manufacture of paper money.—Although distinct from the question of coinage, the manufacture of paper money may be given brief mention. It is desirable that the engraving and printing of paper money be left in the hands of the government. This is the case in the United States, for example, where the Bureau of Engraving and Printing at Washington manufactures all the hand-to-hand paper money that is used in the United States, including the notes of the issuing banks. The advantage in this lies in the fact that uniformity in size and design is possible, and design may be sufficiently intricate to make counterfeiting difficult. A special type of paper is also used in the United States which helps to prevent imitation. The paper money now in circulation was made of uniform design for all notes of a given denomination beginning with the Series of 1928, whereas former series had different designs for each different type of note. This makes for more ready recognition of each denomination of paper money by all classes of people and thus increases the difficulty of counterfeiting such money.¹³

KINDS OF MONEY

Full-bodied and credit money.—The moneys in the typical monetary system may be divided naturally into two fundamental groups. They are (*a*) full-bodied money, and (*b*) credit money. Money is full-bodied when its value as a commodity is as great as its value as money. That is, a full-bodied coin must contain enough metal so that its bullion and money values are the same. Prior to the outbreak of World War I, practically all the gold standard countries provided for the minting of full-bodied gold coins and, since these coins actually embodied the standard of value, they were called standard money, a terminology that still exists. Such a use of the term standard money is perfectly correct, but its use has long been extended to include some other types of money that are not full-bodied. As a matter of fact,

¹³ *The Commercial & Financial Chronicle*, June 1, 1929, p. 3618, contains a description of this currency. The notes are made one-third smaller in size than the old notes in order to reduce expense.

at the present time, so far as the author is aware, full-bodied money is not in use in any advanced country. Yet the term standard money is still used and represents the money of final redemption. Thus in England, notes of the Bank of England would be considered standard money since they cannot be redeemed in any other form of money. This was the case even before 1931, when Bank of England notes were redeemable not in any other form of money, but in gold bullion. In the days before World War I, when the standard of value was embodied in some of the coins of every gold standard country, the term "standard money" would have referred only to money containing the standard of value. At present, however, with no such money in circulation, the term "standard money" may best be applied to the money of final redemption. It is necessary, nevertheless, not to confuse standard money, as thus defined, with full-bodied money as described above.

When standard money is conceived as full-bodied money, its functions are naturally the same as those attributed to the standard of value. It fixes the value of the other moneys and, in so doing, becomes the basic money of the system. It also serves, in gold standard countries, as a means of foreign payment. It derives these functions from its gold content, however, and not from its coined form. The latter does, of course, make it useful as a domestic medium of exchange, but this function is by no means distinctive of standard money alone. Standard money is always made full legal tender and this is sometimes, though not always, a distinctive feature of such money.

Representative money.—Before going on to a discussion of the second main type of money (credit money), it is necessary to mention one type of money that is neither full-bodied nor credit, and this we shall call representative money. If gold coin or bullion, when taken to the Treasury of a country, may be exchanged for an equal amount of gold certificates, the latter become merely warehouse receipts for so much deposited gold, and the recipient no more becomes the creditor of the government than he would become the creditor of the warehouseman with whom he had stored cotton and from whom he had obtained a receipt therefor.

Such money is representative money in the fullest sense, since it represents actual money or gold that has been deposited. If a country issues such gold certificates in exchange for deposited coin or bullion, they should be included as standard money. Their use simply forms one way of circulating gold as contrasted with its circulation in the form of coin.

On the other hand, if similar certificates are issued against some form of credit money, they should be considered as part of the country's stock of that credit money against which they are issued. It is only proper, therefore, to class representative money as standard when it is issued against deposits of standard coin or bullion. As a matter of fact, in drawing fundamental distinctions between the different kinds of money in the system, certificates of the sort described may be left out.

Credit money.—We shall consider as credit money any sort of instrument that is widely used as a medium of exchange and that, when so used, permits an economy in the need for full-bodied money or bullion. Such money may originate with the government or with the central or individual banks of the system. The types of credit money for which the banks are responsible will be discussed later. For the present, we shall confine our attention to the various possible kinds of government credit money.

Government credit money may be either paper or metallic. If the government issues formal promises to pay standard money to the bearer on demand in the form of paper notes, the recipient of such notes becomes the creditor of the government. As long as the holders of such notes are confident that the government will convert them into standard coin or bullion upon demand, very few will be presented for redemption, and the government may—if it so desires—effect a considerable saving in the amount of standard money it must keep on hand for redemption purposes, a reserve of 50 per cent of the outstanding notes being ample to maintain convertibility upon all except the most extraordinary occasions. Such government notes may be given substantial, if not complete, legal tender powers and in almost all domestic

transactions, they then become a substitute for standard money, and are used partly to form bank reserves (for the redemption of bank credit money) and partly in general circulation. Thus they resemble gold certificates, but differ from the latter in that a saving in gold may be effected by their use, while no such saving is possible with the use of the representative certificates.

Metallic coins that are, in effect, credit money may also be issued by the government. If a country that is upon a gold standard, for example, puts into circulation silver coins the metallic content of which is worth less than the face money value (as measured in standard money), and then keeps these coins at par with the standard money by making them convertible into it, such coins are credit money even if the promise to convert them into standard money is not specifically stated upon their face. And, if the government confers upon these coins practically complete legal tender powers, they become nothing more than silver notes that differ from the paper notes we have described only in the cost of the substance from which they are made. Neither the paper nor the silver is worth as much, *per se*, as the money into which it is made, its value as money being maintained by the possibility of converting it, directly or indirectly, into standard money when desired. This, as we shall see later, is the case with the silver dollars issued by the United States government. The recipient of such money becomes the creditor of the government. He does not receive full value in the form of silver when he accepts these coins and must depend upon the government to keep their value equal to that of standard money. A saving in gold is clearly possible, and existent, when such short-weight silver coins are issued. As in the case of gold certificates, if silver certificates are issued against deposits of short-weight silver coins, they may be considered as one way of circulating the silver and hence identical with the type of money they represent.

Subsidiary money.—Metallic credit money is also issued by the government in the form of *subsidiary money*. Such money is for the purpose of making change and is conse-

quently coined in small (fractional) denominations. Aside from this, subsidiary money has other special characteristics. (1) It is made *short in weight*, so that it is worth more as money than as metal and will not be melted down. (2) The *amount* of subsidiary money is *limited* to the needs of business, and such money is therefore coined on government account. If everyone were permitted to take the metal from which subsidiary coins are made to the mint and receive in exchange the corresponding coins with a monetary value much in excess of the value of the metal they contain, the operation would be so profitable that the country would soon be flooded with subsidiary coins and their value would depreciate. To avoid this the government buys the necessary metal and coins only a sufficient number to satisfy the needs of trade. (3) Subsidiary coins are made of some metal that is *less valuable* than that contained in the standard money, as a general rule. Otherwise, either the fractional coins would have to be so small as to be practically useless, or the standard coins so large as to be very cumbersome. (4) Since large amounts of fractional coin are a nuisance when received in payment, the law usually *limits the legal tender* power of such coins to payments of relatively small size. (5) Lastly, subsidiary coins are usually made directly convertible into standard money. This is not absolutely essential, as such coins may be kept at par by a judicious limitation of their amount, but the convertibility feature gives an added insurance against their depreciation.

Subsidiary coins are usually made out of silver, although the very small denominations are ordinarily made from nickel, copper, or bronze in order to permit coins of usable size. The latter are called *minor coins* to distinguish them from their more valuable silver associates, but have similar characteristics. Although fractional paper money has been issued at times in the past, this is not considered a desirable practice because of the tremendous wear and tear to which such money is subjected, and today a metallic fractional currency is used by all countries under normal conditions. Subsidiary money is to be classed as credit money for the same reasons that led us to include the larger denomination short-weight coins previously described in that category.

A classification of money.—In concluding this survey of the different kinds of money issued by the government, it will, perhaps, make for clarity if we attempt to classify these moneys in the form of compact table. Although the two kinds of credit money the banks are responsible for (bank notes and the check currency) have not yet received attention, we shall anticipate a bit and include them in the classification for the sake of completeness. Regarding representative money as synonymous with the metallic coin it represents, the table may be drawn up as follows:

I. Full-bodied money

A. Full-weight coin embodying the standard of value

II. Credit money

A. Government credit money

1. Paper promises to pay on demand
 - a. Full-weight standard coin
 - b. Bullion (the standard of value)
 - c. Claims to coin or bullion in foreign countries
2. Short-weight metallic money
 - a. Unit and larger denominations
 - b. Subsidiary (fractional) money
3. Irredeemable paper money

B. Bank credit money

1. Bank notes
2. Check currency

No attempt has been made to indicate the legal tender powers of the different kinds of money for the reason that the bestowal of these powers is in the hands of the law-makers and hence no uniform policy can be said to exist. Full-bodied money, when coined by the government, is practically always given full legal tender powers, as are the larger denominations of government credit money, while the check currency is never granted such powers, as a normal thing. The other classes of credit money, however, may be granted full, partial, or no valid tender privileges, depending upon the decision of the lawmaking body.

Standard money, per se, is also omitted from the classification, since, as already noted, such money may be either full-bodied or credit, depending upon the type of monetary system in use, and hence does not fall naturally, in every instance, into one of the two fundamental groups.

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CHAPTER 3

THE NATURE AND FUNCTIONS OF COMMERCIAL BANKING

Introduction.—It is impossible to get at the roots of the problem of money without a clear understanding of the banking process, and vice versa. In fact, money and banking are closely associated, for banks not only handle and deal in money, but they perform important monetary functions as well through the issuance of bank notes and the creation of the check or deposit currency. Consequently, before proceeding to attack the complexities surrounding the question of the value of money and monetary policy, it will be essential to become familiar with the nature and functions of commercial banking and the part played by this mechanism in the economic system.

THE NATURE OF COMMERCIAL BANKING

Term loosely used.—The term *banking* is loosely used to mean almost any sort of financial activity, and it is true that the large modern bank of the department-store type, commonly referred to as a commercial bank, with its commercial, savings, trust, safe-deposit and investment departments lends support to such a usage. It is also true that the work of these various departments is closely related and may therefore conveniently be carried on by a single institution. Nevertheless, the business of most of the different departments is not properly to be included under the head of commercial banking, while certain other functions are incidental to the conduct of a commercial banking business.

A definition of commercial banking.—In order to draw a clear distinction between commercial banking functions and other functions frequently performed by banks, which fall outside this category, we may define commercial banking as *the process of pooling and lending or investing the temporary*

surplus funds of the community, together with those functions that are incidental but essential to the fulfillment of that process. It is in the course of this process that the check currency and bank note issues are created. At the present time, the issuance of bank notes has been relegated almost entirely to special institutions, known as central banks, while the bulk of the check currency, in countries having highly developed check systems, is created by the individual commercial banks of the system. Before considering these two important types of money in detail, however, it will be advisable to analyze the banking process from the banker's standpoint and to go over the more important technical details of the business.

The instruments of commercial banking.—At the outset, before describing the banking process itself, it will be well to become familiar with the negotiable instruments connected with that process and with certain details regarding their use.

The instruments in question fall into two classes: bills of exchange and promissory notes. A bill of exchange, according to the Uniform Negotiable Instruments Law, is "an unconditional order in writing addressed by one person to another, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time a sum certain in money to order or to bearer." The word "person," used in this connection, is interpreted to mean an individual, an individual proprietorship, a partnership, a corporation, or a bank.

A promissory note, on the other hand, is defined as "an unconditional promise in writing made by one person to another signed by the maker engaging to pay on demand or at a fixed or determinable future time a sum certain in money to order or to bearer." The word "person" here has the same interpretation as in the case of the bill of exchange.

The difference between the two classes of instruments is clear from their definitions. The bill of exchange is an order drawn by the creditor on his debtor. The promissory note is a promise to pay the creditor given by the debtor. In the case of the bill of exchange, the party who gives the order is known as the *drawer*, the party on whom the order is drawn is the *drawee*, and the party to whom payment is to

Most familiar to the layman among the instruments of commercial banking is the personal check (Fig. 1). The

BETHLEHEM NATIONAL BANK 60 256

BETHLEHEM, PA., _____ 19____ No. _____

PAY TO THE ORDER OF _____ \$ _____

_____ DOLLARS

SPECIMEN

FIG. 1. PERSONAL CHECK

check is an order, drawn by a bank depositor on his bank, requiring the bank to pay a definite sum to bearer or to the order of some specified third party on demand. It thus falls into the class of bills of exchange. The depositor is the drawer, the bank is the drawee, and the party to whose order the check is drawn is the payee.

[illegible]

FIG. 2. CERTIFIED CHECK

Certain other types of check in common use in commercial banking should be noted. Among these is what is known as a certified check (Fig. 2). A certified check is merely a personal check with the word "certified" stamped or printed, and the signature of the proper official of the drawee bank written across its face. This gives the guarantee of the bank that the check is covered by the drawer's deposit and that it

will be paid upon presentation. In order to protect itself during the interval between the certification of the check and its presentation for payment, the bank immediately debits the account of the drawer by the amount of the check and credits an account called "certified checks outstanding" by a like amount, thus segregating sufficient funds to pay the check when it is presented.

FIG. 3. CASHIER'S CHECK

FIG. 4. BANK DRAFT

Another type of instrument that differs somewhat from either the ordinary or certified check is what is variously known as a treasurer's, officer's, or cashier's check (Fig. 3). Such a check is one drawn on a bank by its treasurer, cashier, or other authorized officer, directing the bank to pay to the order of a designated party a certain sum of money on demand. Such a check, once issued, becomes a direct liability

of the bank to pay the specified amount when the check is presented, and a separate liability account—officer's checks outstanding—is maintained for such items by the bank issuing the check.

Finally, among these related items, is the bank draft (Fig. 4). A bank draft is merely a check drawn by the treasurer, or other authorized officer, of one bank upon another bank in which the former institution maintains a deposit account. When the draft is drawn upon a bank in New York City, it is known as a *New York draft*, and the buyer is said to be purchasing New York funds or New York exchange, since the draft is drawn upon, and hence payable by, a bank in that city.

Other instruments of commercial credit arise out of the dealings between the bank and its borrowing customers. Foremost among these, in American banking, is the promissory note (Fig. 5). This is a promise to pay to the bank

\$ _____	_____ 19____
_____ after date _____ promise to pay	
To the order of _____	_____ Dollars
at Guaranty Trust Company of New York, 140 Broadway, New York City	
Value received _____	

FIG. 5. PROMISSORY NOTE

given by the borrower and may be "on demand" although usually a definite date of payment is specified. Such notes are generally made payable to the order of the maker and, when indorsed by him, become collectible by the bank at maturity. When the note bears only the maker's name it is known as single-name paper, but, if indorsed by a second party, it is called double-name paper.

Two other types of instrument remain to be considered. They are the trade acceptance (Fig. 6) and the bank accept-

ance (Fig. 7). The trade acceptance may be defined as a time draft or bill of exchange¹ drawn by the seller of goods (the drawer) on the buyer of goods (the drawee) ordering the latter to pay the amount of the draft at a fixed or determinable future date, and accepted by the buyer. The word "accepted" is printed, stamped, or written across the face of the instrument and, when signed by the buyer, makes the lat-

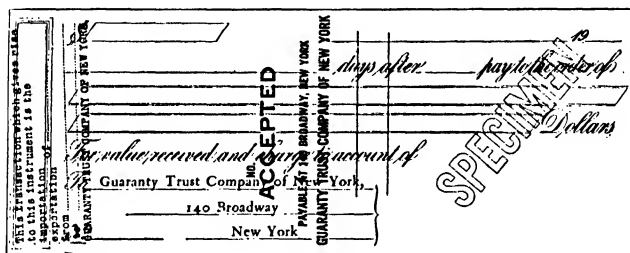


FIG. 7. BANK ACCEPTANCE

ter primarily responsible for the payment of the acceptance at maturity. If the seller of goods holds accepted drafts and wishes to borrow from his bank, he can indorse these acceptances and obtain the needed funds by discounting them at the bank.

A bank acceptance differs from a trade acceptance in that it is drawn—usually by the seller of goods—on a bank instead of on the individual buyer and is accepted by the bank. The bank, in accepting such a draft or bill, becomes fully and primarily liable to pay it at maturity. The bank acceptance is used largely, although not entirely, in connection with the financing of foreign shipments and will be considered more fully in a later connection (Chapter 18).

Negotiability and indorsement.—Practically all of the short term instruments that arise out of the commercial banking process are what are known as negotiable instruments. The legal aspects of negotiability are too extended to be treated here. We shall be content with the broad definition of negotiability, which is transferability by indorsement, the party to whom the instrument is transferred (known as the

¹ The terms "draft" and "bill of exchange" are used interchangeably.

transferee) receiving the right to sue in his own name.² The strict negotiability of the instruments of commercial credit also gives the transferee certain additional legal rights, but we shall not be concerned with these here.

Since the transfer of negotiable instruments from one party to another requires the indorsement of these instruments, it will perhaps be worth while to examine the different types of indorsement and indicate the legal effect of each type on the instrument in question. Indorsements fall into five classes or types which may be listed as follows: (a) blank, (b) special, (c) restrictive, (d) qualified, and (e) conditional. These are illustrated in Figure 8.

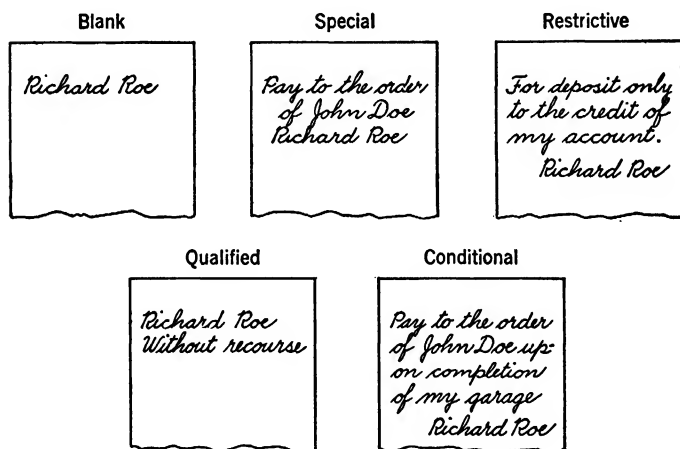


FIG. 8. TYPES OF INDORSEMENT

An indorsement in blank occurs when the transferee merely writes his name across the back of the instrument. An instrument that has been indorsed in blank may be transferred from one party to another without further indorsement and without destroying in any way the legal rights of the holder. A special indorsement is one in which the indorser specifies the party to whose order payment is to be made. That party

² For an excellent discussion on negotiability in relatively concise form, see A. C. Whittaker, *Foreign Exchange*, Chapter II.

then must in turn indorse the instrument before it can be further transferred. A restrictive indorsement forbids payment to anyone other than the party specified. Such an indorsement obviously destroys further negotiability of the instrument. A qualified indorsement is one in which the indorser writes the words "without recourse" beneath his signature. This has the effect of relieving him from any liability to pay the instrument in the event that the party primarily liable fails to pay at maturity. A conditional indorsement makes the payment of the instrument contingent on some act or event that is to take place on some uncertain date in the future. Such an indorsement is of little importance for our purposes. Again, clearly, a conditional indorsement destroys the negotiability of the instrument, at least for the time being.

The banking process.—Having considered the nature and more obvious legal aspects of the instruments of commercial credit, we may now turn our attention to an outline of the banking process. This process consists, in accordance with our definition, in the pooling of temporary surplus funds by the banks through their receipt of deposits and the utilization of these funds. The issuance of bank notes was also formerly a part of this process, but since note issues have almost universally been relegated exclusively to the central banks, we shall not consider such issues in the present connection.

Deposits.—Commercial bank deposits may be made in the form of cash (i.e., hand-to-hand money) or of checks or drafts of the type indicated in a foregoing section of the chapter. Such deposits may be made by individuals, firms, corporations, various institutions (such as churches, clubs, universities, etc.), other banks, and governmental units. Certified and officers' checks outstanding and cash letters of credit are also included under the head of demand deposits in the commercial banking condition reports. The institutions commonly known as commercial banks also receive savings deposits, but since the pooling of such funds is not a part of the commercial banking function, we shall not consider savings deposits in the present connection.

It may also be claimed with some force that banks create

demand deposits by crediting the accounts of borrowing customers by the amounts borrowed. This is true for the system of banks and is an important social function of the commercial banking process. As we shall see later, however, (Chapter 17) this applies only temporarily to the individual bank, which loses such created deposits almost at once to other banks in the system.

Bills payable and rediscounts.—Although the chief source of a bank's funds are its deposits, it may at times find it necessary or desirable to augment these funds by borrowing from the central bank or from some other bank in the system. When this is done, the borrowing bank of course becomes liable for the repayment of the amounts borrowed at some future date, and this liability appears on the bank statement under the head of "bills payable and rediscounts." The term "bills payable" is customarily used in this country in spite of the fact that the bank obtaining the funds more frequently borrows on its own promissory note than on a bill of exchange.

Loans and discounts.—In making use of the funds that have been deposited with it, the bank extends credit to its customers in the form of either loans or discounts. The distinction between these two items is one of form only. When a bank advances a definite sum to a customer and the contract between them calls for the repayment of that sum plus interest, the transaction is referred to as a loan. A discount differs from a loan because interest is deducted by the bank in advance, the customer repaying only the face amount of the obligation. To illustrate, suppose a businessman wishes to borrow \$1000 from his bank for a period of six months and that the rate charged by the bank is 6 per cent. In the case of a loan, the borrower would sign a note promising to pay at the end of six months \$1000 plus interest at 6 per cent. In other words, at the maturity of the loan he would owe the bank \$1000 plus \$30 interest, or a total of \$1030. If the transaction takes the form of a discount, however, the bank deducts the interest, amounting to \$30, from the face amount of the note, thus turning over to the borrower the sum of \$970. Six months later, at the maturity of the note, the borrower would owe the bank \$1000. The borrower pays

a slightly higher rate for his money when his note is discounted than he does in the case of a loan, but for short periods the difference is not appreciable and the convenience of the discount method has led to its wide use by banks on short-time advances.

In the foregoing example, it was assumed that the loan or discount was evidenced by the borrower's own promissory note. As a matter of fact, a borrower may discount bills of exchange in the form of trade acceptances, but the bulk of the paper discounted by the banks in this country is in the form of the promissory note (either single- or double-name) and the note rather than the bill of exchange is used almost exclusively in the granting of loans by the banks.

The loan problem is by all odds the most important one the banker has to meet. A sound loan and investment policy is the heart of sound banking. The importance of making sound loans, from the point of view of the individual banker, may be made clear by an example. Suppose that a bank lends to its customers at a rate of interest of 6 per cent, and that one-third of this (2 per cent of the principal) represents net profit. In such circumstances, the loss of as small a sum as \$2000 on a bad loan would completely offset the net income from \$100,000 of sound loans. It is plain that the banker must use caution and judgment in the extension of credit if his profits are not to be seriously impaired.

The methods generally followed by banks in attempting, so far as possible, to avoid losses are first, to diversify their loans and investments to the extent necessary satisfactorily to spread their risks; second, to require good and sufficient security from the borrower when he has it available; and third, in the case of unsecured loans, to examine carefully each application for credit with a view to eliminating those risks that appear to be unsound. The attainment of a proper degree of diversification is generally left to the banker although, in the United States, the law attempts to cope with the problem by limiting the amount that can be loaned to one borrower. The law may also specify the type of collateral the bank may accept, the margin of safety required, and the types of paper or securities the bank may buy, in an effort to increase the soundness of the bank's loans and invest-

ments. On the whole, however, the decision on whether or not a loan shall be granted must, at least within the limits of the law, necessarily rest with the banker, and the larger banks commonly maintain credit departments for the purpose of investigating the credit risk of prospective borrowers.

Investments.—A bank will usually have some funds that are not loaned out to borrowers and that the bank does not wish to hold idle in the form of reserves. These funds may be invested in bonds, notes, or other obligations of various sorts in order to earn an income for the bank. In recent years, investments of banks have increased greatly relatively to loans (see Chapter 15), and it follows that a sound investment policy, like a sound loan policy, is becoming of great importance in bank management. Whereas, in earlier years, the loan problem was of paramount importance, the investment problem now occupies an important place.

As in the case of loans, a sound investment policy calls for the proper diversification of risks. Otherwise the investment problem is concerned with the soundness of the securities purchased and the state of the market for such securities. The latter is particularly important if the investments are not bought for more or less permanent holding, but may have to be sold shortly to obtain funds for lending or other purposes. Obviously, if the banks buy bonds when the price is high and have to sell them in a lower market, substantial losses may be suffered. Moreover, even if there is no prospect that the bonds will have to be sold, the state of the market at the time of purchase is important in determining the yield the banker will receive.

Reserves.—Not all of the funds deposited with a bank may be loaned to customers or invested. Some portion of the deposits must be held as reserve to meet the demands of the bank's customers who wish to withdraw their deposits. The factors governing the size and composition of a bank's reserve will be discussed fully at a later point (Chapter 13). Here it need only be pointed out that the actual or working reserve for the typical bank in this country consists of cash in vault, deposits with other banks (appearing on the statement as "Demand balances with other banks"), and deposits with the Federal Reserve bank (if the institution is a member

of the Federal Reserve System). These items are frequently grouped together on the condensed form of bank statement distributed to the public.

The size of the reserve maintained by banks of deposit is determined by the type of deposit against which the reserve is held. Naturally, a higher reserve is necessary against deposits that are payable on demand than against those that are subject to notice, for the turnover of the latter is much slower than that of the former. In practice, the size of the reserves held against deposits is fixed fairly definitely either by custom or by law. Custom rules in nearly all countries, but in the United States the practice of designating minimum legal reserves has long been followed.

Items in process of collection.—An important incidental service performed by the banks is the collection of checks and drafts. Many of the banks' deposits are in the form of checks drawn on other banks in the system. In a condensed statement these items are grouped with "Balances with other banks" or "Due from banks," but a distinction should be made between checks and drafts drawn on other local banks, which are technically known as *exchanges for clearing house*, and those drawn on out-of-town banks, which, when put in the mail, are known as *items in process of collection*. In the sub-joined statement (p. 63), these items, exchanges for clearing, and balances due from other banks are lumped together, while the account "Cash items not in process of collection," representing those out-of-town checks and drafts that have been received by the bank on deposit from its customers but have not yet been put in the mail, is also included under this head.

The close relation of these two groups of items to deposits, reserves, and loans should be manifest. As deposits they are not cash, but claims to cash that have to be collected before they become loanable funds. As they are collected they build up the bank's reserve, and, as the latter becomes larger than is necessary to meet the requirements of prudence and safety, the excess amount may be used to increase the bank's loans or investments.

Bankers' acceptances.—Aside from the direct extension of credit to customers, a bank may be of service in granting

what are known as *acceptance credits*. When this is done, the bank, acting on behalf of a customer, accepts a draft or drafts drawn on it by some third party and payable at some future date. The bank issues a letter of credit to the customer authorizing the drafts to be drawn on it and thereby becomes liable for the acceptance of such drafts when drawn and presented to it. After acceptance the bank becomes liable for the payment of the drafts when due. Both letters of credit and acceptances are therefore included on the balance sheet among the bank's liabilities. The customer, however, is obligated to pay the bank the amount of the drafts it has accepted for him on or before the date at which they mature. Consequently, the customer's liability to the bank constitutes an asset that offsets the liability incurred by the bank in engaging in this type of transaction.

The advantage of the bankers' acceptance—which will be treated more fully at a later point—is that it enables a customer to substitute the bank's credit standing for his own with resultant benefit to himself in certain types of transactions.

Capital and surplus.—The foregoing types of transactions cover in a general way what may be termed *the banking functions* performed by the typical bank. Since banking institutions are generally organized as corporations, however, it is necessary to mention the investment of the bank's stockholders in connection with a survey of the banking process. This investment appears on the liabilities side of the bank statement under the head of *capital stock*. Furthermore, every well-managed bank retains part of its earnings in the business instead of paying them all out in dividends. This portion of the earnings constitutes an added investment of the stockholders, which appears on the statement as *surplus* and *undivided profits*.

A part of the funds received from the subscriptions of the stockholders may be invested in real estate and buildings to be used by the bank in the transaction of its business. If the bank decides to rent a building, this investment is, of course, unnecessary. Assuming that the building has been purchased instead of rented, the remaining portion of the capital, as

well as any surplus that is subsequently accumulated, may be invested as the bank sees fit in any safe form of security. Capital funds are not subject to withdrawal as are deposits, therefore they may be directed into any secure investment channel.

From the point of view of the stockholders the purpose of the capital³ is to earn profits for the payment of dividends. The investment in the bank's business of the capital alone, however, would bring meager returns. The margin of profit per transaction on which the bank operates is extremely small, and it is only by acquiring and lending deposits to several times the amount of the capital that it can hope to earn a satisfactory return on the investment of its stockholders. But, in acquiring deposits, the bank acquires creditors, and from the point of view of the latter the purpose of the capital is to protect them against loss. Consequently, there is some conflict of interests between the stockholders and the depositors. Speaking generally, the smaller the capital in relation to the deposits, the larger the earnings on the investment. On the other hand, the larger the proportion of capital to deposits, the greater the protection afforded the depositor.

In practice, the proportion of capital (including surplus and undivided profits) to deposits varies considerably from country to country, and it is impossible to cite any particular ratio as typical. On the whole, however, it may be stated roughly that it is not desirable for banks to allow their capital funds to fall to a point much below 10 to 12 per cent of their total liabilities. Should the proportion become too small, it should be increased either by the sale of additional stock, or by diverting more of the earnings to surplus and less to the payment of dividends.

The banks of most countries are not regulated by law with respect to their capital and surplus or the disposition of their earnings, control over these factors being left to the judgment of the bankers. In some countries, however, of which the United States is an example, a minimum subscribed and paid-in capital is required before a bank may

³ For the sake of simplicity, the word *capital* will be used to denote both capital and surplus in the present discussion.

begin business. Where the establishment of a banking business is free to all, a reasonably rigid capital requirement helps to discourage financially weak and incompetent men from entering the business, and also tends to prevent the establishment of banking units of such small size that earnings may fail to cover overhead expense, and that proper diversification of loans may be impossible.⁴ The national banks of the United States are also required to carry one-tenth of their earnings to surplus until the latter shall equal the capital stock.

The bank statement.—The results of carrying on a banking business are best shown by the bank's statement of condition or balance sheet as published periodically by banking institutions in this country. The accompanying statement, based on a recent combined report of national banks, will serve to show the relations between the various items that have been discussed in the preceding paragraphs. Certain items on the statement, which it has not been deemed necessary to consider here, will be dealt with at a later point (Chapter 19).

The purpose of the discussion up to this point has been to indicate the nature of the banking process by a brief consideration of the types of transactions engaged in by the individual bank. The remaining pages of the chapter will be devoted to an analysis of the significance of banking functions in the economic activity of the country.

THE FUNCTIONS OF BANKING

Effective distribution of capital.—The chief function of banks in the economic system is to effect a distribution of surplus funds into productive channels. This is made possible through the pooling of funds, which occurs as a result of the acceptance of deposits by the banks. The deposits of all the banks of the system constitute a reservoir or pool from which the productive needs of business may be supplied. In order clearly to understand the manner in which the banks perform this function, it will be necessary to consider the banking system in relation to the economic system as a whole.

⁴ See article by R. P. Crawford in *Barron's*, August 1, 1927; quoted in Rodkey, *The Banking Process*, p. 47.

UNITED NATIONAL BANK

Statement of Condition, December 31, 1946

RESOURCES

Loans and investments (including overdrafts)	\$63,722,648
Reserves, cash, and bank balances	20,012,043
Due from own foreign branches	4,669
Bank premises, furniture, and fixtures	552,152
Other real estate owned	8,478
Customers' liability on acceptances	73,257
Income accrued but not yet collected	136,358
Other assets	52,633

LIABILITIES

Demand deposits (including officers' and certified checks and demand deposits of other banks)	60,322,001
Time deposits (including postal savings)	18,452,654
Due to own foreign branches	160,164
Bills payable, rediscounts, and other liabilities for money borrowed	20,047
Acceptances outstanding	83,267
Dividends declared but not yet payable	34,109
Income collected but not yet earned	56,619
Expenses accrued and unpaid	222,981
Other liabilities	72,748

CAPITAL ACCOUNTS

Capital	1,752,071
Surplus	2,271,959
Undivided profits	784,733
Other capital accounts	328,885
Total assets or total liabilities plus capital accounts	84,562,238

In the present economic order, which may be termed a *Money economy*, goods and services are produced, not for the use of the particular individuals producing them, but for exchange for money, which is in turn spent in the markets for other goods and services that these particular individuals want. Further, the productive and distributive processes are themselves broken up into a number of steps. One set of business men is responsible for the production of raw materials. These materials in turn are sold to the manufacturers who convert them into finished goods which must

then pass through the hands of the wholesalers and the retailers before they are purchased by the final consumer.

Each of the business enterprises or individuals in the productive and distributive chain receives a money income in exchange for the goods or services sold in the market. The bulk of this income is immediately spent for other goods or services. The major portion of the gross income of business enterprises, for example, is presently spent to replenish stocks of raw materials for manufacture and for labor and capital with which to carry on the productive process. In merchandising establishments, most of the gross income is reinvested in merchandise inventory. As for the wage-earner, the greatest part of his income is spent at once for consumable commodities and services.

While each of the participants in the productive process spends practically all of his money income almost as soon as it has been received, it should be noted that not quite all of it is thus spent. Every business enterprise must, of necessity, keep some portion of its assets in the form of immediate purchasing power to meet claims to payment which may and do arise. It is never certain that payments from debtors for goods sold will be forthcoming at the exact times and in the exact amounts necessary to meet debts due to creditors, and some margin of cash must be maintained in the business to assure the prompt payment of such debts. Even individuals, unless in very straitened circumstances, set aside some small portion of their incomes to meet contingencies or to build up a fund for investment. It is these surpluses of purchasing-power that form the deposits of the banks.

Without the mediation of the banks, these surplus funds would of necessity be held in the form of cash (i.e., hand-to-hand money) by the individuals and enterprises in question. To illustrate, suppose that Jones, a merchant, has obtained \$5000 in cash from the sale of a part of his stock of goods. He has some payments to make in the succeeding few weeks that will require the use of practically all of this balance, but not all of these payments have to be made on the same day, and the expenditure of this amount will be spread over the interval in a somewhat irregular fashion. A certain

amount will be paid out, possibly, in three days, another in a week, another in two weeks, and still another in about a month. He will, perhaps, have an *average* holding of \$2500 cash throughout the month, but the *actual* amount held will vary from \$5000 at the beginning of the interval to very little at the end.

In the circumstances it should be clear that Jones could not lend his balance and thus make it available to industry without the intervention of some banking mechanism. Perhaps he knows another merchant, Smith, who would like to borrow \$2500 for thirty days, but he cannot lend Smith this amount for the desired period since, before the thirty days have elapsed, he will need all but a small portion of his balance to meet his own payments. Furthermore, he cannot afford to spend his time looking for borrowers who want just the amounts he has available for exactly the periods of time for which he might be willing to lend them. His business is selling merchandise, and he would scarcely find it economical to engage in an entirely unrelated pursuit which, in the end, would in all probability prove to be unsuccessful.

The significance of the pooling process.—If these various surpluses of individuals and business enterprises are deposited with the banks instead of being held as cash, it is possible to make use of a large portion of them. While deposits in the bank are subject to withdrawal on demand or at comparatively short notice, the pooling of a large number of different deposits or surpluses results in withdrawals being offset in a large part by other deposits, so that the banks are in a position to lend or invest the bulk of these deposited funds, keeping only a relatively small amount available as reserves.

As to deposits that are payable on demand, the small bank with relatively few depositors may at times be subjected to withdrawals that are considerably in excess of deposits. For the system as a whole, however, deposits and withdrawals are approximately equal. It is hence important that the banks of the system be so organized that excess deposits in certain areas may be available for use in those sections where a

deficiency of surplus funds has manifested itself. When this is the case, the amount of final or standard-money reserves needed by the system is reduced to a minimum.

The pooling process just described results in a double saving to industry. Thus, to revert to our first illustration, it not only permits Jones's \$2500 average balance to be loaned to Smith, when without the mediation of the bank it would have been held idle in the form of cash, but it also permits Smith to maintain a smaller proportion of his assets in cash than would otherwise be necessary, since he knows that he can borrow at the bank to meet temporary, seasonal, or unusual needs. If Smith were not able to do this, he would have to maintain a large enough supply of cash in his business in the dull seasons to meet his peak needs, a procedure that is decidedly uneconomical.

Selective utilization of funds.—Not only do the banks effect a distribution to, and utilization by, industry of surplus funds that would otherwise be held idle in the form of cash, but they also see to it that these funds are distributed in a highly selective fashion. From the point of view of their own safety, they must necessarily examine carefully the financial position of those to whom they lend or in whose securities they invest. It is true, of course, that some banks come to grief through unwise lending and investment policies. By and large, however, there is no question that the banks are superior to the great majority of individuals in their ability to invest their funds in sound and efficient enterprises. They thus perform a service for the depositor and for the economic system as a whole in assuring the utilization of surplus funds by those best able to make sound and efficient use of them.

The transfer of funds.—Another function of the banking system, which is essential to its chief service of pooling and lending deposits, is the transfer of funds from one part of the country to another. The technique by which such transfers are effected will be treated in subsequent chapters. It will suffice to point out here that the performance of this function has led to the development of the check or deposit currency, our most efficient and widely used medium of exchange. Checks drawn on one bank are, to a large extent,

canceled against checks drawn on other banks, and, to the degree that this takes place, the use of hand-to-hand money is obviated and the utilization of surpluses is made that much more efficient.

In making foreign payments, the service performed by the banks in transferring funds is of large significance. In this connection, as well as domestically, the cancellation of claims plays an important part in facilitating trade and bringing about the most efficient utilization of surplus funds.

In addition to transferring funds by means of checks or drafts, the banks have developed systems of telegraphic transfers, so that payments may be made at distant places without the loss of time necessary to the sending of checks or drafts by mail. The value of this service is obvious.

Collection of time items.—Another incidental service performed by the banks is the collection of maturing notes or drafts for customers. Since the banks at times discount notes and drafts on out-of-town establishments, they must be prepared to present these instruments to the payer at maturity and so have the facilities at hand for making such collections. In a sense this service is a part of the larger one of transferring funds and may well be considered in relation to it.

Fiscal agent for government.—Some or all of the banks in the system usually act as fiscal agents for the government. In so doing, however, they are performing no new function, but are merely extending to the government the benefit of those services that are regularly offered to the banks' private customers.

THE ORIGIN OF COMMERCIAL BANKING

Early banking development.—In the civilization of the ancients, there is evidence of the use of certain instruments similar to those now employed in modern banking. Conant points out, for example, that "Assyria, as early as the seventh and even the ninth century before Christ, possessed a system of commercial instruments, which included promissory notes, bills of exchange, and transfer checks, not unlike the modern bank check."⁵ Coined money was not in use, so that pay-

⁵ *A History of Modern Banks of Issue*, p. 1.

ment in specified weights of silver or copper was usually stipulated. The notes and bills were made of clay tablets, baked hard to preserve the impressions on them, and placed in the temple or record chamber of the city for safe keeping.⁶ Banking of a sort was also carried on in Greece and Rome at later dates, and the reference in the New Testament to the activities of the money-changers in the Temple at Jerusalem is, of course, perfectly familiar. With the advent of the Dark Ages, the business of banking sank into obscurity, to be revived with the return to commerce and industry at a later period.

Early European banking.—The revival of banking in the Middle Ages was first brought about in Italy by private individuals who engaged in business in the market places on benches, or *banchi*. From these beginnings there developed gradually a number of powerful private banking establishments, such as the Peruzzi and the Bardi.⁷ These Italian bankers financed wars for kings and other large projects, and the two mentioned finally failed because certain kings, who owed them large amounts, repudiated their debts.⁸

The first bank of a public nature was the Bank of Venice, founded supposedly in 1157.⁹ The drapers carried on a banking business in Barcelona as early as 1349, to be followed by a public bank in 1401. The Bank of Genoa was also established shortly thereafter, in 1407. The Banks of Venice and Genoa continued in business until the close of the eighteenth century.

Some time after the establishment of these Italian banks, the center of commerce in Europe shifted to the north, a movement marked by the organization of the historically famous Bank of Amsterdam in 1609.¹⁰ The Bank of Hamburg was founded in 1619, the Bank of Stockholm in 1688, and the Bank of Vienna in 1703. Various other banks, in Germany, Austria, Russia, and France were established at somewhat later dates.¹¹ In addition to these public institutions,

⁶ *Ibid.*, p. 2.

⁷ H. deB. Gibbins, *The History of Commerce in Europe*, p. 167.

⁸ Edward III, of England and the King of Sicily. *Ibid.*, pp. 47-48.

⁹ Gilbert, *Works*, IV, p. 8.

¹⁰ For an interesting description of this bank, see Adam Smith's *Wealth of Nations*, I, p. 481, 6th edition.

¹¹ Gibbins, *op. cit.*, p. 167.

many private bankers and banking houses, such as the Fuggers and Welsers of Augsburg, and the Hochstetters of Amsterdam, made prominent names for themselves at various periods in the Middle Ages and thereafter.

Nature of European banks.—The early European public banks did not engage in what would now be called banking, but rather performed services of a monetary nature. The metallic currency in circulation, in the smaller states especially, was made up of a heterogeneous mixture of full-weight, clipped or mutilated, domestic, and foreign coins. The attribute of uniformity, so essential to satisfactory trade, was therefore lacking, and the chief purpose of the Banks of Venice, Genoa, Amsterdam, etc., was to remedy this monetary difficulty. The method used to accomplish this was as follows: all sorts of metallic money—clipped, worn, or foreign—were received on deposit by the bank by weight only, a credit being given in terms of the standard money of the country, which corresponded to the fine weight of the coins received, less a small amount to cover the cost of recoinage and the necessary expenses of management of the bank. These credits on the books of the bank were called *bank money*. They could be easily transferred by order or check, so that they possessed the advantages of convenience and safety, while, at the same time, the resort to bank money as a means of payment eliminated the difficulties engendered by the heterogeneous metallic circulation.

The private bankers, on the other hand, were in the nature of financiers. They made loans to kings for carrying on wars and financed other projects that held out the prospect of a high profit. They did not confine themselves to lending money, however, but built up huge interests of their own. Thus, "the Fuggers endeavored to acquire large territories in Chile, and the Welsers of Augsburg under Charles V obtained an entire province in Venezuela,"¹² while, between 1511 and 1517, the Hochstetters attempted to corner the tin market. It is accordingly somewhat of a misnomer to call these private houses banking establishments, since receiving deposits and subsequently lending them was only one of a wide list of financial interests.

¹² Conant, *op. cit.*, p. 12.

The origin of banking in England.—In England, prior to 1640, it was the habit of the London merchants to keep deposits of bullion in the Tower, but in that year Charles I seized these deposits to the amount of £130,000, and they were repaid only after some time had elapsed and much confusion had resulted.¹³ This action led the merchants to seek elsewhere for a safe depository for their money and bullion. It was idle for them to try to keep it on their own premises, for they were defrauded by their clerks who either decamped with the money or, when less dishonest, loaned it out to goldsmiths for a specified return. The merchants thereupon decided that they had better place their money with the goldsmiths directly.

At first the object of depositing money with the goldsmiths was to procure safety, and the merchants would have been satisfied with the attainment of this end, even without receiving any return upon the deposited funds. The goldsmiths, however, found that they could lend out these deposits to good advantage and so began to offer a substantial rate of interest in order to procure more of them. While carrying on this business, the goldsmiths also performed the function of money changing (i.e., dealing in exchange), and, for a time, continued their earlier practice of dealing in and working with gold and silver bullion and ornaments. The receiving of deposits and making of loans, however, shortly surpassed their original business in importance and finally superseded it.¹⁴

While the chief object of the goldsmiths in accumulating deposits was to make a profit from lending them at high rates, the merchants were at first impelled to make these deposits, as already indicated, as a matter of security. Before long the element of convenience was added to that of safety. This resulted from the ease with which payments could be made under the new system. The goldsmiths agreed to repay the deposits on demand, and the merchants could have withdrawn coin or bullion when they had payments to make, but they found it simpler either to write an order

¹³ See Andreades, *History of the Bank of England*, pp. 18-20.

¹⁴ A good brief description of the beginnings of banking with the goldsmiths in England is to be found in Andreades, *op. cit.*, pp. 20-26.

against the goldsmith to pay a specified amount to a designated party, or to accept the goldsmith's promissory notes for the payment of definite sums, which notes could, in turn, be used by the merchants as a handy means of meeting their payments. These goldsmiths' notes may be considered as the earliest form of English bank note, while the orders of the English merchants against the goldsmiths constituted the prototype of the modern check.

Although there was considerable criticism of the way in which some of the goldsmiths carried on their business, it was not until 1694 that any noteworthy change took place. In that year, the Bank of England was established. It was created as a private company, but soon (1697) was given partial monopoly privileges, and in 1709 it was granted a real monopoly of note issue. It became a bankers' bank in part, and the bulk of the regular banking business of the country continued in the hands of the private London and country banks.

The emergence of commercial banking systems.—As shown in the foregoing paragraphs, it is possible to distinguish functions resembling those of modern banking as far back as the Middle Ages and, prior to that, in ancient times among certain advanced peoples. On the other hand, it was also noted that, in a number of ways, these banks differed fundamentally from the modern commercial banking institution. Banks of the Amsterdam type served a monetary function in providing a uniform currency, the private bankers did an investment and speculative business, while the early English goldsmith bankers pooled deposits and extended loans, but the loans were frequently not for productive purposes.

In England the full development of commercial banking was forced to await the passage of an act in 1833 which permitted the establishment of joint stock banks in London. It was not until some years after the establishment of the Bank of France in 1800 that the French banking system attained a definite form. In Germany, the establishment of the Empire in 1871 necessarily preceded the development of a unified banking system, although the different German states had banking facilities before that date. The development

of the banking system of the United States began about the turn of the nineteenth century, while the less developed region occupied by Canada did not need highly organized banking facilities until some time later.

This rather belated development of unified banking systems is, perhaps, not to be wondered at. The nineteenth century ushered in an era of unprecedented industrial expansion, the credit needs of which could be met only with the assistance of improved banking facilities capable of financing the ever-increasing production of goods made possible by machine methods under the factory system. The growing credit requirements of industry and trade permitted specialization in purely banking functions with results distinctly favorable to unified banking development. Furthermore, many of the earlier coinage and monetary problems had been solved, in part at least, which allowed the banks to turn their attention in large measure from money-changing to the extension of credit to business enterprises.

Conclusion.—The bulk of this chapter has been devoted to a general survey of the nature of commercial banking and the functions it performs in the economic system. In the great majority of countries, however, the business of the commercial banks is supplemented and controlled by the operations of specialized institutions known as central banks. It seems desirable, therefore, to include at this point a general description of the nature and functions of central banking, and the following chapter is accordingly devoted to this purpose.

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CHAPTER 4

CENTRAL BANKING

Origin and nature.—In modern advanced countries the central bank is an integral part of the commercial banking and monetary system. It is only in comparatively recent years that central banking per se has received much attention. Before World War I, the Bank of England, the Bank of France and the German Reichsbank, among others, were recognized as central banks, but their chief distinguishing feature was the practical monopoly of note issue privileges that they were granted by their governments. Moreover, certain large countries, such as the United States and Canada, had no institutions of this sort, and the same was true of a number of smaller countries.

The earlier central banks had their origin as a rule in their ability to serve the government financially. Thus the Bank of England, at the time of its organization, granted the government a perpetual loan of £1,200,000, the amount of the bank's capital, which was later increased from time to time. In exchange for such accommodation, the government permitted the central bank to issue notes and, in the usual case, denied that privilege to other banks, with the exception, in certain instances, of a limited number of banks which already had outstanding note issues.

In these early days, note issue privileges were considered essential to the conduct of a commercial banking business, which accordingly placed any bank with a practical monopoly in the issue of notes in a position of great advantage. Consequently, the early central banks did a large business with the general public and were, in an important sense, *the* commercial banks of their day.

As time went on, however, other institutions began to develop a commercial banking business. This was especially true in England where the rapid evolution of an efficient

check system made the conduct of commercial banking comparatively simple, even without the note issue privilege. This led the Bank of England to focus its attention on the problems of maintaining the redeemability of its notes in gold, controlling the money market in London, and, when necessary to the first purpose, using its powers of control to influence the movement of gold into or out of the country. While a general banking business was still carried on, it began to assume an importance that was secondary to the performance of the functions noted.

In other countries, where the check system failed to develop, the central banks continued to do a large business with the general public. Even in these countries, however, banks of deposit doing a commercial business were organized, although their deposits were not subject to check. This led to a large measure of dependence on the central bank for notes, central bank notes being obtainable by rediscounting customers' paper at the central institution. The central bank accordingly came to exercise considerable control over the affairs of the other commercial banks.

In the countries in which central banking structures were established after a fully-developed commercial banking system had long been in operation, the tendency has been to limit the powers of the central bank to dealings with the existing commercial institutions. In other words, the central bank was designed to be a bankers' bank, not an institution doing business with the general public.

The functions it performs as a bankers' bank distinguish the central bank from other institutions, whether it does business with the general public or not. It is accordingly with these specialized central banking functions that we shall be concerned in the following pages.

CENTRAL BANKING FUNCTIONS

Traditional functions.—The traditional pre-World War I view of the functions of a central bank, based in large measure on the established procedure of the Bank of England, has been clearly and concisely summarized by Dr. B. M. Anderson, Jr., as follows:¹

¹ *Chase Economic Bulletin*, May 16, 1932, p. 4.

(1) It is the business of a central bank to protect the paper money of the country by converting it into gold on demand. This is its first and most essential function, and everything else must be subordinated to this.

(2) It is the business of the central bank to ease off monetary stringencies and to prevent business crises from degenerating into money panics. In a crisis, the central bank supplies whatever money is necessary, at a steep discount rate. It enables solvent men to protect their solvency, but it does not regard it as its duty to validate the unsound assets of really insolvent men, or to help defer the liquidation of stale positions.

(3) In times of great speculative excesses, whether in commodities or in securities, central banks should act to prevent the extension of unsound credits, to protect the liquidity of the banks of the country, and to check speculative excesses by tightening the money market.

Until comparatively recently these were considered to be the distinctive and proper functions of a central bank by practically all banking students. They would still be held by a majority of monetary and banking experts under normal gold standard conditions. At the present time, however, with practically all important countries off the gold standard, the first function stressed by Dr. Anderson, and considered as most essential, is no longer valid. In the United States, on the other hand, gold reserves are so excessive that no difficulty would be encountered in redeeming Federal Reserve notes in gold were such redemption freely permitted by law. Since it is not, redemption of notes in gold, here as in foreign countries, can no longer be considered the central bank's foremost function.

Stabilization of the price level.—Even before the general departure from the gold standard in the early thirties, an increasing number of economists adopted the position that the chief function of a central bank should be to maintain a stable level of prices. This doctrine, in its most extreme form, is illustrated in the following quotation from an article by the noted Swedish economist, Professor Gustav Cassel, written after the collapse of the American stock market in October 1929:²

A central bank has no other function and should never for a moment contemplate taking over any other function than that of keeping the purchasing power of its currency in regard to commodities at the highest possible stability.

² "Safeguards of Prosperity," *American Bankers Association Journal*, December 1929, p. 568.

Not many observers would go to these lengths in asserting that the maintenance of a stable commodity price level was the only proper function of a central bank. Some favor stabilizing the cost of living. Others would include wages, rents, and security prices in the price index they would have stabilized. Still others would not have the stabilization of the price level the sole objective of central banking policy, but merely an important aim to be attained so far as possible with due allowance for the existence at times of other significant factors.

In short, there is still little unanimity of opinion with regard to details and technique on the part of those who favor the general concept of stability of the price level as the major aim of central banking policy. At all events, the pursuance of such a general policy by the central bank raises serious question regarding the maintenance of the gold standard, the control of credit, and other problems of a monetary nature, analysis of which must be postponed to a later point. This objective is merely mentioned here since it is now considered to be a proper central banking function by a substantial group of authorities.

Stabilization of business.—Another group of monetary theorists consider the stabilization of business to be a prime function of the central bank. This group differs from the price level stabilizers in that its members feel that the central bank should aim at the maintenance of business stability—high productive output, unimpeded flow of goods to market, a balance between production and consumption, etc.—without paying much attention to the price level. Drastic changes in the price level, it is claimed, are a result rather than a cause of business instability. Therefore, if the central bank can maintain a balance among the various elements in the business structure, disturbing fluctuations in the price level will be largely eliminated.

This objective, like that of the price stabilizers, involves subtle problems in monetary theory that cannot be considered critically until the factors determining the value of money have been carefully studied.

Controlling foreign exchange.—A function of many central banks, especially following the outbreak of war in Europe,

consisted of controlling exchange rates in the foreign exchange market. Such control is exerted by purchasing all foreign exchange from those who have claims against foreigners and then strictly regulating the sale of exchange to those who wish to make purchases in foreign countries. By keeping the demand for exchange exactly equal to the supply in this fashion, a high degree of stability of the country's monetary unit in the foreign exchange market may be secured when not on the gold standard. Most of the belligerent countries adopted varying degrees of exchange control, the actual control being carried out by the central bank under the direction of the Treasury. In countries practicing exchange control, this function may be considered as replacing the redemption of notes in gold under gold standard conditions.

CHARTER REGULATIONS AND RESTRICTIONS

Explanatory note.—In the following pages, which are concerned with charter regulations and restrictions of central banks, it should be noted that the discussion, for the most part, deals with the type of regulations and restrictions that were contained in central banking charters before World War II. In fact, in some sections, as in that dealing with note issues, the regulations discussed are those that applied when the central bank concerned was required to redeem its notes in gold, as was the case under gold standard conditions.

The reason for this method of treatment is that similar material applying to the postwar period is, in large part, lacking. It has seemed more desirable to describe and comment upon the regulatory provisions that were in force before the war than not to treat the subject at all, although, of course, certain well-known changes, such as the nationalization of the Bank of England, are fully and properly treated.

Form of organization.—Almost without exception, central banks are organized in the form of corporations or joint stock companies under special charters granted by the state. These charters set forth the powers and privileges which are allowed to the bank as well as the restrictions under which it is required to operate. They ordinarily run for a definite period of time, being subject to renewal on the same or different terms at the date of expiration, although several

countries have granted indefinite or indeterminate charters to their central banking institutions.³ Although there are many points at which central bank charters differ from one another, it will be worth while to summarize the typical charter regulations and restrictions of central banks generally. These may be discussed under the heads of capital and earnings, management, nature of business, and relations with the government.⁴

Capital and earnings.—The central bank, as has been indicated, holds a position of prime importance in the banking system and must therefore possess a financial structure of unquestioned soundness. Sufficient capital is one important requisite in the attainment of this end, and central bank charters have accordingly included the requirement that at least a specified minimum of proprietors' capital shall be represented in the business at all times. The proportion of assets equivalent to the capital item then constitutes a margin of protection for the benefit of noteholders, depositors, and other creditors of the bank, in the event of unusual losses or of liquidation. An argument against an unduly large capital, on the other hand, is to be found in the fact that central banks are strictly limited in the type of business they may undertake. Because of these limitations, too large a capital investment may easily result in the accumulation of an unnecessarily large amount of idle cash that cannot find investment opportunities in proper channels.⁵ Furthermore, these very limitations on the bank's business are for the purpose of insuring against unsound or non-liquid investments, so that a large capital requirement is not so necessary as in the individual profit-making institutions that engage in a somewhat wider scope of business.

In actual practice, it may be stated that capital requirements for central banks tend to be smaller than would be considered proper for individual banking institutions. This statement is made, of course, with reference to the majority of central banks the stock of which is privately owned. We need

³ See Kisch and Elkin, *Central Banks*, Appendix I.

⁴ The organization of the material presented in this section of the chapter has been suggested in part by the arrangement of the textual portion of Messrs. Kisch and Elkin's *Central Banks*. The author is also indebted to this admirable piece of work for much of the factual information referred to in this section of the chapter.

⁵ *Ibid.*, p. 40.

not consider here the cases where the capital is held entirely by the state.

Earnings.—It is a traditionally accepted maxim that a central bank should not be operated primarily for profit. The nature of its functions in the banking system is such that profit-making is not always compatible with the most efficient performance of central banking duties. On the other hand, it has already been pointed out that the majority of central banks are privately owned companies of the joint-stock type, and it is not reasonable to expect their stockholders to go unrewarded. The problem has therefore been to provide a reasonable return to the stockholders while yet insuring sound and conservative management in the best interests of the banking system as a whole.

An examination of central banking laws⁶ shows a considerable degree of uniformity in the method used to meet this problem. In the usual case, a fixed initial dividend is specified to be paid to shareholders. Earnings in excess of this amount are then usually distributed in some designated fashion between the bank (i.e., carried to surplus), the government, the stockholders, and in some cases the employees. There are but few instances, that of the United States being the most important, in which the dividend to central bank stockholders is absolutely fixed. The more usual procedure permits shareholders to participate in any large profits the bank may make, but only after a considerable slice of earnings has been retained in the business or paid to the government.

Surplus.—Much of what has been said about capital applies to the building up of a surplus by central banks. Some surplus is desirable as an additional protection to creditors, and most central banking laws provide for the creation of a surplus out of earnings, as related in the preceding paragraphs. Furthermore, an increase in the bank's surplus forms a convenient method of increasing the margin of protection to creditors without an increase in the capital stock, which, although it may have been sufficient at the time the bank began business, has failed to keep pace with subsequent development. At the same time, a surplus may prove convenient by virtue of permitting the payment of dividends in

⁶ *Ibid.*, Appendix I.

slack years or the absorption of losses without impairing the formal capital of the bank.

Liquidation.—It is naturally to be expected that a central bank will be a continuously operating institution. Nevertheless, governments have generally made provision for winding up the affairs of the central institution under certain extreme conditions. Fraud, inefficiency, flagrant mismanagement, and at times, improper interference by the government represent the types of conditions under which liquidation may occur.

Management.—Although the majority of central banks are privately owned, it is common for the government to have some share in the management, while in a number of countries the entire management of the central bank is in government hands. Neither of these arrangements, however, is as common as that which provides for a division of managerial functions between representatives of the state and representatives of the bank's stockholders.

The problem of management is perhaps the most important in the whole field of central banking. The central bank plays such a significant part in the monetary and banking systems of a country and may be such a powerful engine for good or evil that the managing body should be selected with an eye to the attainment of the highest possible degree of honesty, efficiency, and ability.

Having created such a powerful machine as the central bank, the government ordinarily feels that it should have a hand in its operation. On the other hand, particularly in democratic countries, full control by the government of the central bank management is extremely dangerous, since the administration in power is almost certain to operate the bank in such ways as will prove to be expedient politically, but which are not usually in the best interests of the country.

In order best to protect the interests of the government and of the public and, at the same time, to avoid political control of the central bank by the particular party in power, a rather common expedient in the past has been to allow the government to appoint a minority of the governing board—often including one or two important officials—while the majority of the board has been selected by the stockholders. If the governmental appointments are for substantial terms

of office, so that they cannot be readily juggled to suit the political needs of the moment, this method of dividing control between the government and the stockholders is probably as satisfactory an arrangement as can be readily resorted to.

If the central bank could be depended upon always to hold the interests of the banking system as a whole ahead of opportunities for profit making, the need for any government representation in the management would best be dispensed with entirely. In fact, it is a real question in any country whether, with proper restrictions regarding dividends, a completely private management would not be the best arrangement. If the government feels, however, that it should be represented in the management of the bank, it is desirable to limit its representation to a minority of the governing board in order to be certain that central banking policies shall not be closely tied to the exigencies of government finance.

While the foregoing conclusion is perfectly valid, the trend in recent years has been in the direction of greater government control rather than less. Thus, prior to 1936, the Bank of France had a board of fifteen Regents and three Auditors elected by the stockholders and a Governor and two Deputy-Governors appointed by the President of the Republic. After the passage of the law of July 24, 1936, the governing board was increased to twenty-six, mostly public appointees, and only two selected by the stockholders.

Similarly, under the original charter of the Bank of Canada in 1934, the government had no direct voice in the management. An amendment of 1936 altered this arrangement by increasing the capital stock, the increase to be held by the Minister of Finance on behalf of the Dominion. The same amendment made a majority of the members of the board of directors appointees of the government. After the advent of the Hitler regime in Germany, the Reichsbank was under government control, and in the United States, the Board of Governors of the Federal Reserve System, which has predominant powers of control, consists entirely of government appointees. Finally, the Bank of England, which may be considered the dean of central banks and which had never been subjected to any direct government control in its management, was nationalized in 1946 by the socialists who had gained

control of the government following World War II. It need hardly be added that the communist countries maintain full control of their central banks. Thus, the former, and highly proper, practice of dividing control between the government and the stockholders appears to be decidedly on the wane.

Nature of business.—It has already been pointed out that, in countries in which the central bank has been long established and has developed with the banking system of the country, it is common to find the central institution endowed with the power to carry on a general banking business with the public. We find this to be true of the central banks of England, France, and a number of other countries.

In spite of the fact that many of the older central banks do a general banking business, it is not in this connection that they merit special treatment. It is rather with their unique functions, which differentiate them from the other banks of the system, that we are concerned at this point. In many ways, the most significant of these is the power to issue notes.

Note issues.—The typical central bank has a monopoly of the right to issue bank notes in the country of its location. This exclusive privilege is of particular importance in countries such as France where the use of checks has not as yet become widespread, for it gives the central bank control over the chief type of domestic currency. This probably explains in part the large general business of the Bank of France, in contrast to the limited business with private enterprises engaged in by the Bank of England, the wide use of checks in England having made the note issues of the Bank of secondary importance from the point of view of its own business. From the social point of view, however, in England as well as in countries with less highly developed check systems, the note issue privilege is of wide importance, for it is customary for the other banks of the system to use central bank notes, in part at least, as reserves against their own deposits, the notes being full legal tender in many cases. Consequently, the issuance of central bank notes is practically uniformly surrounded with limitations and regulations to insure their soundness.

The chief problem in the regulation of such note issues is to prevent excessive issues with resulting inflation and undue

loss of gold to foreign countries. This problem applies, of course, only when the international gold standard is in operation, but may be considered here in spite of the fact that the full gold standard has been abandoned by practically all countries for the present. Two methods have been used for attaining the end mentioned above. The first is the system followed in England, Japan, Norway, and Sweden. The central banks of these countries were permitted to issue specified amounts of notes without specie backing, known as uncovered or fiduciary issues, although security in the form of government obligations, commercial paper, and the like, was usually required against these notes. Any notes issued in excess of the specified amounts must then be secured by 100 per cent of specie, except in the case of Sweden where 50 per cent specie only was required against excess issues. A degree of emergency elasticity is given to such note issues by permitting an increase in the fiduciary issue under certain extreme conditions.

The second and more common method of preventing excessive issues of notes is to require the maintenance of a proportional reserve against notes in circulation. If, in addition, the notes may be secured by general banking assets or commercial paper, an element of elasticity is secured that is out of the question with a fixed fiduciary issue. The degree of elasticity is, of course, limited by the size of the reserve that must be maintained, the larger the reserve the less the possibility of expansion. On the other hand, since central bank notes are very generally given substantial or complete legal tender powers, it is desirable to have a fairly large proportional reserve. In practice, the reserve required in the more important countries on the gold standard varied from $33\frac{1}{3}$ to 50 per cent, 40 per cent being the minimum most frequently required. A number of countries, however, permitted their central banks to hold a portion of this reserve in foreign exchange, so that the proportion of notes held in gold in the bank's own possession was often less than the percentages mentioned.⁷

⁷ See the *Federal Reserve Bulletin*, August 1929, p. 563. This discussion applies, of course, to the period before the widespread departure from the gold standard in the last four months of 1931.

Business with other banks.—Aside from its note issue powers, the typical central bank plays a significant part in acting as a bankers' bank. In this capacity, it performs services for the individual banks similar to those which the latter perform for business men. It receives deposits from them, extends them credit in time of need, collects checks and other items, transfers funds from place to place, and so on. Just as individual business men consider both hand-to-hand money in their possession and deposits in the bank as their reserves of cash, so the banks of the system include central bank deposits, as well as notes of the central bank, in their reserves against their own liabilities. Very little standard money is held by the banks as a result. Thus the central bank has the responsibility of holding practically the entire final (i.e., gold) reserve upon which the credit and monetary system is based.

Because of the heavy responsibility involved in protecting the country's gold reserve, when a gold standard is maintained, and of assuring the greatest possible stability in the value of the country's currency, it is customary and proper to limit the type of loans that a central bank may make to the soundest variety. As stated by Messrs. Kisch and Elkin,

To comply with the tests of eligibility for purchase or discount by a Central Bank the paper should conform to certain requirements in respect of the purpose for which it has been created, its period of maturity and its quality. As regards purpose, the prime *desideratum* is that the paper should be drawn to provide finance required for *bona-fide* commercial purposes, which would cover outlay incidental to the production, transport and marketing of agricultural and industrial goods. Such bills are of their own nature self-liquidating, as the sale of the commodity provides funds for the payment of the bill. These requirements are not satisfied by papers drawn to finance the carrying of stocks and shares, and if any such paper is to be admitted as an asset of a Central Bank there is need for definition.⁸

If paper of the latter type is admitted at all, its purpose is usually restricted to carrying or trading in government obligations or bonds of public or quasi-public enterprises. Even when the discounting of government paper is permitted, the total, with the exception of short-term treasury notes or bills, should be limited to some proportion of the paid-in capital and surplus—although usually it is not.

⁸ Kisch and Elkin, *op. cit.*, p. 124.

Control of the money market.—Another important function of the central bank is to stabilize conditions in the money market, preventing, so far as possible, undue fluctuations of money rates such as tend to result from treasury financing, large exports and imports of gold, and similar factors. To make possible the performance of this function, the central bank is usually given the power to buy and sell gold, to obtain loans in foreign countries, and to buy and sell certain specified types of paper or securities in the open market. These powers, together with the ability to change its discount rate, give the bank a measure of control great enough to prevent sudden and undesirable disturbances in the money market of the country. Funds may be pumped into or withdrawn from the market by the purchase or sale of open-market paper, thus offsetting, when desirable, opposite influences resulting from tax payments, government disbursements, or substantial gold movements.⁹ Alterations, upward or downward, in the rate of discount may also be used to supplement open-market operations by attracting or repelling funds from foreign markets, as the situation may require.

Relations of central banks with the government.—It may easily be inferred from the preceding discussion that there is usually a close relationship between the central bank and the government. In the first place, the central bank practically always acts as a fiscal agent for the government, holding the latter's temporary surplus funds on deposit, assisting it in the flotation of bond and note issues, aiding in the collection of taxes and in making disbursements, and performing other services of a similar nature. On the whole, it is highly desirable that the central bank should act in this capacity. Only by so doing, in fact, can it exert a substantial influence in stabilizing conditions in the money market.

A second manner in which the central bank can serve the government is by making loans to it. While the right to grant loans to the state may be considered as justifiable within certain limits, it may easily be abused unless regulated by law, especially when one or more important government appointees are included in the managing body. Clearly, the government representation in central bank management

⁹ The method by which this is accomplished is explained more fully in Chapter 16.

should be for the protection of the public and the banking system, not to secure favored treatment for the public treasury department. Consequently, the charters of many of the central banks limit the amount and duration of loans that may be made to the state. It is true, of course, that in time of war, or other national emergency, such legal regulations are frequently suspended, but this is no less true of regulations governing the standard of value as well, and the presence of some such statutory limitations in normal times is without question highly salutary.

Central banks in wartime.—The foregoing discussion of powers and limitations of central banks has indicated certain general practices, as well as variations in these practices, on the part of governments in chartering their central banking institutions. It should be pointed out, however, that in time of war or other emergency, many of the restrictions and limitations normally in force are relaxed or abandoned. It should be borne in mind, therefore, that the principles and practices set forth in this chapter are, except where specifically noted, applicable to normal peacetime conditions. It is neither possible nor desirable at this point to discuss all the deviations from ordinary practice which the war has engendered. A few have been noted in passing, but there are many others. Since they are temporary in nature, and subject to abrupt change, it does not seem worth while to attempt to describe them. It will suffice to note that they exist and to concentrate our attention on the more fundamental and lasting principles of peacetime central banking.

Conclusion.—We have now considered briefly the nature, functions, and origin of money and of commercial banking. Before turning our attention to a detailed analysis of the banking process and the important problem of the value of money, it seems advisable to describe the development of the monetary and banking systems of the United States. The chapters that follow are accordingly devoted to this subject.

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PART II

HISTORICAL DEVELOPMENT

CHAPTER 5

MONETARY DEVELOPMENT IN THE UNITED STATES

1792—1932

Introduction.—The monetary history of the United States contains examples of the operation of many of the monetary standards described in Chapter 2. The use of specific commodities as money is exemplified in Colonial times. Thereafter, bimetallism, the paper standard, and the gold coin standard were in use in three different periods of American monetary development. More recently, even the so-called “commodity dollar” or managed currency type of standard has been the subject of an experiment in the United States, while at present the country maintains a provisional gold bullion standard.

A summary of American monetary development is thus valuable in presenting concrete illustrations of the principles and practices already described and in furnishing as well the basis for a better understanding of present-day problems and policies. The present chapter will be concerned with the development of our monetary system up to 1933, while the following chapter will contain, in somewhat greater detail, an account of the dynamic changes and experiments that have taken place since the spring of that year.

The background of the coinage.—Although the monetary system of the United States really began its existence with the passage of the act of April 2, 1792, the enactment of this piece of legislation was the result of the diverse and unsatisfactory currency conditions existing at the time. It accordingly seems desirable to describe, in brief outline, the situation that prevailed before the passage of the act of 1792.¹

¹ The description here given is based on an excellent treatment of the subject in N. Carothers, *Fractional Money*, Chapters III-V.

Colonial currency.—In the English colonies the shilling was universally adopted as the monetary unit. While this was to be expected, because of the familiarity of the colonists with the money of the mother country, there was no uniformity in the values of the shilling units of the various colonies. As a matter of fact, there was very little English coin in use. Many of the colonies had attempted to overcome the scarcity of coin by resort to commodity currencies, and staple products such as corn, cattle, wool, tobacco and beaver skins were used as money in different colonies in this early period. The wampum of the Indians was also in use. What coin there was consisted of a variety of foreign issues, the predominant type throughout all the colonies being the Spanish dollar and its fractions.

The colonial shillings, in the circumstances just described, represented merely the valuations placed by the colonies on the various commodities and coins upon which they had conferred legal tender powers, and these ratings of the circulating media in shillings and pence were fluctuating and diverse. "This practice," says Carothers, "is the outstanding feature in the history of colonial currency. It influenced the currency development of the United States long after the achievement of independence."²

An emission of Treasury bills by Massachusetts in 1690 set the example for similar issues of government paper money by the other colonies. In some of the colonies these issues of paper money were excessive, and depreciation and repudiation resulted. The issues of other colonies were more moderate and, consequently, more satisfactory. Even where the paper currency was issued to excess, metallic money reappeared in circulation with each repudiation of government notes, and none of the colonies was for long without some metallic circulation. Nevertheless, government paper was the most important form of money in the colonies until, by the acts of 1751 and 1764, the English Parliament suppressed the issue of legal tender paper by the colonies.

Money during and after the Revolution.—With the advent of the Revolutionary War paper money again assumed a place of first importance by reason of the issuance of paper

² *Ibid.*, p. 20.

currency by the Continental Congress, in addition to state issues, some of which were independent and some guaranteed by the Continental Congress. The issues were excessive and led to depreciation and eventual collapse. The direct issues of the Continental Congress were significant, however, in that the notes purported to be payable in "Spanish milled dollars or the value thereof in gold and silver."³ This signified the adoption of the dollar as a standard unit in place of the shilling, and paved the way for the use of the dollar as the unit of value in the monetary law of April 1792. From this time forth, government accounts were kept in dollars, although the majority of the states continued to rate the circulating medium in shillings, and shilling ratings in private transactions continued for many years.

In the issues of the Continental Congress the decimal system was not used. Dollars were divided into ninetieths with fractional denominations of $\frac{1}{9}$, $\frac{1}{6}$, $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{2}{3}$ of a dollar. Many of the states used other fractional denominations based on the dollar or the shilling with the result that, taking the country as a whole, a remarkable assortment of fractional notes of "1, 2, 3, 4, 5, 6, 7, 8, 9, and 10 pence and $\frac{1}{16}$, $\frac{1}{10}$, $\frac{1}{9}$, $\frac{1}{8}$, $\frac{1}{6}$, $\frac{1}{5}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$, and $\frac{2}{3}$ of the Spanish dollar" was to be found in circulation.⁴

After the termination of the War, a number of the states set up mints and experimented with coinage, and Congress also began to look into the matter of the coinage as early as 1782. A report prepared by Robert Morris in conjunction with Gouverneur Morris was submitted to Congress by the former in that year. While sound and ingenious, the plan advocated by Morris was unduly complex and was replaced by a more understandable proposal by Jefferson, which embraced a dollar unit or standard and the decimal system of denominations. On July 6, 1785, Congress formally approved these two features of the plan. On October 16, 1786, the Mint Ordinance was passed by Congress, confirming the coinage proposal already approved, providing for mint officials, and legislating in detailed fashion concerning copper coins.

³ *Ibid.*, p. 37.

⁴ *Ibid.*, p. 40.

While a few copper coins were issued under the Mint Ordinance, no great progress was made until after the adoption of the Constitution in 1789. When the Constitution had been finally approved, the House of Representatives, in 1790, directed Alexander Hamilton to prepare a plan for a national mint. The majority of his recommendations, which were based in part on earlier proposals, were finally incorporated in the coinage law of April 2, 1792.

<i>Denom- ination</i>	<i>Name</i>	<i>Metal</i>	<i>Gross Wt. (grains)</i>	<i>Fine Wt. (grains)</i>	<i>Fineness</i>
\$10	Eagle	Gold	270.00	247.50	0.91667
5	Half Eagle	Gold	135.00	123.75	0.91667
2½	Quarter Eagle	Gold	67.50	61.875	0.91667
1	Dollar	Silver	416.00	371.25	0.892
0.50	Half Dollar	Silver	208.00	185.625	0.892
0.25	Quarter Dollar	Silver	104.00	92.8125	0.892
0.10	Disme	Silver	41.60	37.125	0.892
0.05	Half Disme	Silver	20.80	18.5625	0.892
0.01	Cent	Copper			
0.005	Half Cent	Copper			

Source: *Coinage Laws of the United States*, Act of April 2, 1792.

First period, 1792-1834.—The first legally authorized monetary system of the United States was adopted with the passage of the coinage act of 1792. This act provided for (1) the establishment of a mint, (2) the gold dollar unit consisting of 24.75 grains of fine gold and the silver dollar unit consisting of 371.25 grains of fine silver, (3) the adoption of the decimal system of denominations, and (4) the free and gratuitous coinage of certain specified gold and silver coins of the denomination, weight, and fineness indicated in the accompanying table, at a ratio of 1:15.

The coinage ratio of 1:15, which was adopted in 1792, was at first nearly in accord with the ratio of gold to silver in the bullion markets. Consequently, for a time, both gold and silver were coined at the mint and circulated side by side within the country. Not long after the beginning of the nineteenth century, however, silver began to fall in value rela-

tively to gold, with the result that the ratio of 1:15 overvalued silver at the mint. The latter metal, accordingly, tended to displace gold in the circulation of the country, and, by 1810-12, gold had practically disappeared from circulation. Even earlier than this—by 1806—the amount of silver brought to the mint for coinage, as measured in dollar value, began to exceed that of gold, and this excess of silver over gold coinage continued with but one exception each year until 1833.⁵ The total dollar value of gold coined at the mint from 1806 to 1833 inclusive was but \$9,278,332, as compared with a total value of silver of \$34,364,669 during the same period.⁶ This was the case in spite of the fact that no silver dollars were coined by the mint from 1806 to 1836, the bulk of the silver coins which were struck during these years being silver half dollars.⁷

Although the United States was legally on a bimetallic standard during the entire period, 1792-1834, with a mint ratio of 1:15, practically, the standard of value was silver for somewhat over one-half of this time, gold having almost disappeared from circulation by 1810. The obvious cause of the predominance of silver in the circulation was a mint ratio that overvalued silver and so made it unprofitable to import gold. In these circumstances, Mexican gold went to Spain (with a ratio of 1:16) and France (with a ratio of 1:15½), while Mexican silver came to the United States. In order to correct this situation, it was necessary to alter the ratio at which gold and silver would be received at the mint for coinage.

Second period, 1834-1862.—By the act of June 28, 1834, the mint ratio of gold to silver was altered, but to an extent that made it evident that gold would be overvalued at the mint instead of silver. The new law left the silver dollar of the same weight and fineness as before, but reduced the weight of pure gold in the eagle (and in other coins in proportion) from 247.5 grains to 232 grains, while its gross or

⁵ "The exceptional gold coinage of 1820 was due to special importations of gold by the Bank of the United States, in order to bring about specie payments." Laughlin, *The History of Bimetallism in the United States*, p. 31, footnote 1. This particular year—1820—is the exception referred to.

⁶ Totals computed from the annual totals for the years in question as shown in the *Report of the Director of the Mint 1927*, p. 94.

⁷ *Ibid.*, p. 90.

standard weight was reduced from 270 grains to 258 grains, thus giving the gold coins a fineness of 0.899225. The unit of value, the dollar, was accordingly fixed at 23.2 grains of fine gold or 371.25 grains of fine silver, which resulted in a mint ratio of 1:16.002. A subsequent act, January 18, 1837, brought about a uniform fineness of .900 of gold and silver coins by reducing the gross weight of the silver dollar from 416 grains to 412.5 grains, leaving the fine weight as before, and raising the fine weight of the eagle to 232.2 grains without altering its standard weight of 258 grains. This changed the coinage ratio slightly to 1:15.988 plus, usually referred to as 1:16, but this change was of minor significance and did not prevent gold from being overrated at the mint.

The ratio of 1:15, established by the act of 1792, had resulted in the withdrawal of gold from circulation. The acts of 1834 and 1837 established a mint ratio which overvalued gold, a fact that would lead one to expect the disappearance of silver from the circulation. For several years, however, silver coins remained in circulation in spite of the fact that fractional silver coins were full-weight and might have been expected to disappear. The explanation of this situation lies in the small discrepancy between the mint and market ratios together with the release of large amounts of silver from bank reserves, the silver being replaced by gold. Thus for several years the country operated under a bimetallic system that was apparently satisfactory.⁸

This comparatively satisfactory monetary situation was not to last, however. The gold discoveries of the late forties caused the value of gold to fall in relation to silver and substantially increased the discrepancy between the mint and market ratios, so that the withdrawal of silver from circulation became distinctly profitable. By 1850, the country's business was seriously embarrassed by lack of small change for retail transactions. Congress, in the act of March 3, 1849, had authorized the coinage of gold dollars (not previously authorized), but no provision had been made against the withdrawal of fractional silver coins from circulation.

⁸ For a complete analysis of this period, see N. Carothers, *Fractional Money*, pp. 98-101.

Some alleviation of the difficulties was accomplished by the passage of the act of March 3, 1851. This law provided that the mint should coin a three-cent piece weighing $12\frac{3}{8}$ grains and containing three parts of silver to one of copper. The intent of Congress was apparently that these three-cent pieces should be freely coined, but the law was not specific in its instructions and was administered as a subsidiary coinage measure. It was passed, not primarily to remedy the scarcity of small coins, but to assist the post office in the sale of three-cent postage stamps.

The benefits of the act of 1851 were not extensive. Retail trade still suffered measurably from a currency composed chiefly of gold dollars, three-cent pieces, and much-worn fractional Spanish coins. In fact, the situation became so chaotic that Congress was finally forced to enact a more comprehensive measure. This was the coinage act of February 21, 1853. Under this law, the standard weight of half dollars was reduced from 206.25 grains to 192 grains, and the weights of the other fractional silver coins were reduced in proportion. The fineness of .900 was retained, so that the reduction in the pure silver content of the fractional coins amounted to approximately 6.9 per cent. Fractional coins were to be struck on government account only and their legal tender powers were limited to sums not exceeding five dollars.

By reducing the silver content of the silver fractional coins, by limiting their coinage, and by restricting their legal tender powers, the act of 1853 established a true subsidiary coinage in the United States and took the first step toward placing the country upon a single gold basis. Silver dollars had never been coined in significant amounts since 1806, so that the removal of the rights of free coinage and full legal tender from fractional silver practically eliminated the use of silver as a standard of value.

The reduction in the fine silver content of the fractional coins was barely enough to insure their circulation, and a larger reduction might well have been made. Moreover, the law was badly administered in the years following 1853 and was defective in not providing for the redemption of the subsidiary coins. Nevertheless, the coins did not, fortunately, attain a bullion value in excess of their money value, nor

did the maladministration of the law do the damage that it might have under slightly less favorable conditions.⁹ The country accordingly maintained a gold currency with subsidiary silver until the time of the Civil War.

One other piece of monetary legislation, enacted before the Civil War, deserves mention. The act of February 21, 1857, provided for the coinage of a cent piece weighing 72 grains and containing 88 per cent copper and 12 per cent nickel. These coins were to be issued in exchange for gold, silver, or pure copper coins and were also to be exchanged for Spanish and Mexican silver at fixed ratings regardless of the state of wear of the latter coins. The act resulted in a plethora of cent pieces, but it was successful in eliminating the Spanish and Mexican silver and in popularizing the use of the one-cent piece, since the new coins were smaller and more attractive than the old copper cents. The half-cent piece was also abolished by this act.¹⁰

Third period, 1862-1879.—During this period the monetary system of the United States was on an irredeemable paper basis. The issues of United States notes, or greenbacks as they are popularly termed, resulted from the war finance policy followed by the government at the time of the Civil War and marked the beginning of paper money issues by the United States government.¹¹ The act of February 25, 1862, authorized an initial issue of \$150,000,000, one-third of which was for the purpose of retiring a like amount of demand notes that had been issued in the summer of the previous year. A second issue of \$150,000,000 was authorized in July of 1862, \$50,000,000 of which was to be temporary. On March 3, 1863, a third issue of \$150,000,000 was authorized. This was the final issue, so that a total of \$450,000,000 of these notes was authorized and issued during the course of the war.

⁹ For an excellent account of the defects and illegal administration of this measure see Carothers, *op. cit.*, Chapter X.

¹⁰ See Carothers, *op. cit.*, Chapter XI for a detailed account of this legislation and its significance.

¹¹ This is not strictly accurate. Something over \$3,000,000 of treasury notes of less than \$100 denomination and bearing no interest were issued under the act of February 24, 1815, and were used as money. Because of the smallness of the issue, however, they have been disregarded. The demand notes of 1861 were a kind of cross between one year treasury notes and paper money, and have also been disregarded.

Since the notes so issued by the government were not redeemable in gold on demand, although they were full legal tender in all payments except duty on imports and interest on the public debt, and were also issued in excess of the monetary needs of the country, gold immediately went to a premium and greenbacks became the basic money of the system, a situation that continued until 1879. Not only was paper money the circulating medium for the larger denominations during this period, but for the fractional currency as well. Soon after the beginning of 1862, the paper dollar had depreciated in value to an extent that made profitable the withdrawal of subsidiary silver from circulation. The first legal tender act had prohibited the issuance of notes of less than five-dollar denominations. The second legal tender act authorized one-dollar notes, but this did not remedy the difficulties that business was experiencing as a result of the disappearance of subsidiary silver. Temporary unauthorized tokens—known as *shinplasters*—had been issued by business firms and individuals to meet the need for small change, but the resulting situation was highly unsatisfactory and demanded a remedy. Further, the Treasury was frequently embarrassed in the making of small payments. Consequently, on July 17, 1862, six days after the passage of the second legal tender act, another act was passed authorizing the use of postage stamps as money. Since the use of actual gummed stamps had serious drawbacks, stamps without glue, purporting to be issued under the authority of the law of July 17 but actually not legally authorized, were issued. On March 3, 1863, another law was passed, which provided for the issuance of regular fractional notes by the government. This fractional paper currency remained in circulation throughout the Civil War and, in fact, was not redeemed in anything except greenbacks until after the passage of the resumption act of 1875.¹² Even the minor coins bore a premium during the war period, but remained in circulation as their metal content was not sufficient to warrant their melting or export.¹³

The subsequent history of the greenbacks may be briefly

¹² A detailed account of the postage and fractional paper currency is to be found in Carothers, *op. cit.*, Chapter XII.

¹³ *Ibid.*, Chapter XIV.

stated. An act, passed on April 12, 1866, provided that United States notes might be retired to the amount of \$10,000,000 during the following six months and at a rate of not more than \$4,000,000 per month thereafter. This authority was suspended by the act of February 4, 1868, only about \$44,000,000 of notes out of a possible \$70,000,000 having been retired by the latter date. After the panic of 1873, the government reissued \$26,000,000 of the canceled notes in response to a public demand for them. The amount outstanding after this reissue remained at \$382,000,000 until the gold resumption act of January 14, 1875, which provided for a reduction of this amount to \$300,000,000. By May 31, 1878, the amount of greenbacks outstanding had been reduced to \$346,681,016. An act of the latter date abruptly halted the policy of deflation and required the notes to be reissued whenever redeemed. This requirement has not been altered by subsequent legislation, and the last mentioned amount still remains outstanding. From January 1, 1879, when gold resumption began, until 1933, United States notes were redeemable in gold at the Treasury.¹⁴

The act of February 12, 1873.—Although the United States was on an irredeemable paper basis until 1879, two monetary laws of importance—aside from the resumption act—were passed in the later years of this period. The first of these was the act of February 12, 1873. The measure was designed to be a general revision of the coinage laws and many of its provisions were unimportant from the point of view of monetary development. It may be noted that the gross weight of the half dollar was altered from 192 grains to 12½ grams (192.9 grains), the present weight, and the other silver subsidiary coins were changed in proportion. The silver half dime, the silver three-cent piece and the bronze two-cent piece were discontinued. The most significant feature of this law, from the point of view of monetary development, however, was that it officially dropped the silver dollar from the list of coins which could be struck at

¹⁴ The factual material contained in these sections has been procured from a government pamphlet, *Monetary Systems of the Principal Countries of the World*, compiled in the office of the Director of the Mint, 1916, pp. 5-7.

the mint. A heavier trade dollar of silver was authorized, presumably for export trade purposes, but the standard silver dollar was definitely dropped. Since the other authorized silver coins were subsidiary, this had the effect of placing the United States, legally, upon a single gold standard. Very shortly after the passage of this act, the silver interests, for reasons that will appear presently, found to their chagrin that it was no longer possible to have their silver freely coined into standard dollars. They thereupon claimed that the law of 1873 had resulted from a conspiracy in Congress against these interests, and they accordingly dubbed it "the Crime of '73." That such an accusation was false is perfectly clear from a study of the facts. The bill was openly passed in the presence of the representatives of the silver interests without arousing any great outcry. As a matter of fact, the coinage of silver dollars had been trifling since the opening of the mint and the silver dollar coin was dropped because there was not at that time, and had not been for years, any noteworthy demand for it.

The reason for the vexation of the silver owners with the act of 1873 is to be found in a change in the market ratio of gold to silver that occurred about this time. The mint ratio 1:15.988, which had been on the statute books since 1837, had overrated gold and, by the operation of Gresham's law, had caused silver to disappear from circulation. During the latter years of the period, 1837-1873, the value of silver had been falling relatively to that of gold. This decrease in the value of silver resulted from a rapidly increasing production of the metal, as compared with gold, from metallurgical improvements in recovering the metal from the ore, and from certain changes in the monetary arrangements of Germany and other European countries. Although this situation was not recognized by the lawmakers at the time of the passage of the act of 1873, it nevertheless existed. By 1873, the market ratio of gold to silver had reached 1:15.93, had descended to 1:16.16 by 1874, to 1:17.75 by 1876.¹⁵ Clearly the coinage of silver dollars at the old ratio of 1:15.988 would have proved highly

¹⁵ *Report of the Director of the Mint* 1927, p. 112.

profitable by the latter year. The discontent of the silver interests with the monetary situation following 1873 is, therefore, easily explained.

The act of February 28, 1878.—Nor were the silver owners satisfied to let matters rest as they were. Successive attempts to secure legislation for their own benefit were finally successful in part, but in part only. The outcome of these efforts was the act of February 28, 1878, generally known as the Bland-Allison Act. By this law, the Secretary of the Treasury was directed to purchase silver bullion, at its market price, to the extent of not less than \$2,000,000 worth nor more than \$4,000,000 worth per month, and to require this bullion to be coined into standard silver dollars of the former weight and fineness. This was limited coinage and was not what the silver interests wanted. They were forced to rest content with this expedient, however, for a number of years. Meanwhile, the Treasury began the redemption of United States notes in gold on January 1, 1879, and the country was once again on a gold standard.

Fourth period, 1879-1900.—As a result of favorable natural and economic forces, the country was able to maintain the gold redemption of greenbacks that had been begun in 1879. Nevertheless, all was not clear sailing. The silver group, not content with the act of 1878, as already noted, continued active in its efforts to obtain legislation more suited to its purposes. The result was the *Sherman Silver-Purchase Act of 1890*. By the terms of this act, the Secretary of the Treasury was directed to purchase monthly, at a price not to exceed one dollar for 371.25 grains, 4,500,000 ounces of silver or such fraction thereof as should be offered on the market. To pay for this silver, the Secretary was authorized to issue Treasury notes of the United States. These notes were to be redeemable at the Treasury on demand *in either gold or silver* at the discretion of the Secretary of the Treasury, and they were to be full legal tender in the payment of debts except where otherwise expressly stipulated in the contract. Of the bullion purchased each month, 2,000,000 ounces was to be coined into silver dollars each month until July 1, 1891. After that, as much was to be coined as was necessary to provide for the redemption

in silver of the Treasury notes issued under the authority of the act.

The expulsion of gold.—The results of the act of 1890 very nearly caused the departure of the United States from the gold standard. Under the operation of the act, nearly \$156,000,000 of legal tender notes was added to the lawful money stock of the country. The natural effect was to inflate the currency and increase speculative activity in the organized markets which, in turn, resulted in a loss of gold by export to foreign countries. The usual procedure by which the metal was obtained for foreign shipment was by the presentation of legal tender notes to the Treasury for redemption in gold, so that large exports of gold naturally resulted in a drain on the Treasury's stock of coin and bullion. In 1891 and 1892, the government's reserve for the redemption of legal tender was drawn down to a marked extent. The year 1893 was a panic year, and it was the opinion of many that the difficulties of business were a result of the undue increase in the country's monetary stock through the issuance of Treasury notes to pay for the monthly purchase of silver bullion. With difficulty an act was pushed through Congress (November 1, 1893), repealing the purchase clause of the Silver Purchase Act of 1890, but the mischief had already been done. It will be remembered that the redemption of Treasury notes of 1890 in either gold or silver was made optional with the Secretary of the Treasury. Treasury notes, therefore, might have been redeemed in silver, but gold redemption was maintained during all of this troublesome period in spite of the attenuation of the Treasury's gold reserve. To continue the redemption of legal tender in gold, however, was not easy. Two issues of bonds, of \$50,000,000 each, were sold for gold in 1894, one in January and one in November. The proceeds from these bond sales built up the gold reserve temporarily, but in each case it was soon drawn down again below the \$100,000,000 mark. Early in 1895, the gold reserve decreased rapidly and a departure from gold redemption seemed inevitable. Such an unfortunate occurrence was avoided through a timely agreement between President Cleveland and certain investment banking interests, which involved the sale of an-

other \$62,000,000 of bonds to the investment bankers for gold. For a time the reserve was restored, but later in the year it again fell below \$100,000,000. Finally, it was found necessary to sell another \$100,000,000 of bonds in February 1896. This loan was successful and subsequent difficulties with the gold reserve were avoided for the most part.

The act of March 14, 1900.—The death knell of the silver interests, at least so far as monetary legislation was concerned, was sounded in the presidential campaign of 1896. Under the leadership of the eloquent William Jennings Bryan, the Democratic party engaged in a hard contest for the presidency and the control of Congress on a free silver platform. The return to the bimetallic system was favored with free coinage of both gold and silver at the old ratio of 1:15.988 or "16 to 1," as it was called. However, since the market ratio of gold to silver was approximately 1:30 in 1896, a return to the old system would have resulted in a single silver standard, and the sanction by the government of a substantial partial repudiation of all the then existing debts that had been contracted prior to 1896. Fortunately for the reputation and welfare of the country, Bryan and his free silver followers were defeated at the polls. Bryan again advocated free silver coinage in the campaign of 1900, but by that time the question was pretty largely a dead issue, the so-called Gold Standard Act of 1900 having been passed before the presidential campaign got under way.

The title "Gold Standard Act" has been popularly applied to the act of March 14, 1900, because this statute definitely placed the country on a single gold standard. In the words of the opening section of the law, it was enacted "that the dollar consisting of twenty-five and eight-tenths grains of gold nine-tenths fine . . . shall be the standard unit of value, and all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard, and it shall be the duty of the Secretary of the Treasury to maintain such parity." The act further provided that a gold redemption fund of \$150,000,000 be maintained by the Secretary of the Treasury for the purpose

of redeeming United States notes and Treasury notes of 1890 in gold. With regard to the latter notes, provision was made for the coining of subsidiary silver (up to \$100,000,000 in amount) from the bullion purchased under authority of the act of 1890, and for the cancellation of a corresponding amount of Treasury notes, when they were presented for redemption in silver. The provision of the law of June 13, 1898, requiring the coinage of silver dollars from the bullion purchased with Treasury notes, was re-enacted. For the rest, the act contained certain provisions concerning the issuance of gold and silver certificates, and refunded certain bond issues that furnished security for national bank notes.

Fifth period, 1900-1932.—After the passage of the act of March 14, 1900, no major developments occurred in the governmental phases of the monetary system until shortly after the entrance of the United States into World War I. In the fall of 1917, by presidential proclamation, the Federal Reserve Board was clothed with discretionary power to restrict the exportation of gold to foreign countries, no gold to be exported without the express permission of the Board. While some few gold exports were permitted, the Board stated in its Annual Report for 1917 that "applications for permission to ship gold to European neutral countries have, except for a few days following the date of the order, been invariably declined."¹⁶ This embargo on gold exports continued until the summer of 1919.¹⁷ For this brief period, therefore, the United States was not on a full gold standard. Convertibility of the other moneys of the system into gold, although discouraged, was maintained throughout the war. The maintenance of the gold standard, however, requires not only the convertibility of other moneys into gold, but freedom on the part of the converter to make use of the gold obtained as he sees fit, whether it be for export to foreign countries or for use in the arts. The United States, by restricting exports of the metal, prevented for a time the free flow of gold from the domestic money stock into other uses and accordingly abandoned the

¹⁶ P. 21.

¹⁷ *Annual Report of the Federal Reserve Board 1919*, p. 50.

full gold standard for the period in question. While this procedure may have been justified for the purpose of retaining a large domestic gold stock as a basis for wartime credit expansion, it resulted, nevertheless, in the temporary departure from the gold standard which we have noted.

World War I and the silver situation.—One other occurrence of importance had to do with the influence of World War I on the position of the silver dollar in the monetary system. The silver dollar has long held an anomalous position in this system. Having several of the characteristics of subsidiary money, it is nevertheless full legal tender, is termed standard money by law, and is not specifically convertible into gold, although an indirect convertibility has been maintained as already explained. The gold standard act of 1900 made no provision for the elimination of the silver dollar from the monetary system and no particularly favorable opportunity to retire this unnecessary form of government credit money presented itself until the war period. As the war progressed, the value of silver rose rapidly relatively to gold. Meanwhile, England, faced with the necessity of paying large balances in silver in India and the Orient, appealed to the United States to sell her the necessary bullion from our stock of silver dollars. To accomplish this end, Congress passed the Pittman Act in April 1918, authorizing the retirement of as many silver certificates as possible, the melting up of the silver dollars held in the Treasury behind these certificates, and issuance of Federal Reserve bank notes secured by Pittman certificates of indebtedness to take the place of the silver certificates withdrawn from circulation. The silver bullion was then to be shipped to India and some other Oriental countries for the account of England and to be paid for at the existing high price.

If the provisions of the Pittman Act had stopped here, its passage would have been a most happy occurrence. The silver bullion was readily disposable at the highest price that had existed for years, and the United States had an excellent opportunity to rid its monetary system of an anomalous and unnecessary element, the silver dollar. Unfortunately, however, the act went on to authorize the sub-

sequent purchase, from domestic silver producers at a price of one dollar per ounce, of a sufficient amount of silver bullion to replace all the silver dollars that were to be broken up and shipped from the country. The purchase and coinage of this silver was shortly completed,¹⁸ with the result that our present-day monetary system still finds itself burdened with the anomalous standard silver dollar which is not standard, and its companion, the silver certificate. Not for years, if ever, will another opportunity present itself to the United States government to be rid of the silver dollar in such easy and profitable fashion, nor is there any reason to believe that such an opportunity would be grasped if it did occur. On the other hand, should the government ever decide to eliminate the silver dollar, it could do so by using the silver in this stock of dollars for the coinage of subsidiary silver, instead of buying new silver in the market for this purpose. This method would be effective, but the profit to the government would be less than it would have been had advantage been taken of the opportunity offered in 1918.

The gold standard during the depression.—After the resumption of unrestricted gold exports in the summer of 1919, the gold standard was maintained continuously in the United States until the spring of 1933. In the autumn of 1931, following the abandonment of the gold standard by England and a substantial group of other countries, foreign funds invested or deposited in New York were withdrawn in large amounts. This led to a loss of gold to abroad amounting to about \$700,000,000 in the short space of six weeks. Again, in 1932, the gold stock of the country was reduced by nearly \$500,000,000 in May and June. In spite of these large losses, no real threat to the maintenance of the gold standard developed, although President Hoover, in a campaign speech the following autumn, asserted that the country had been on the verge of abandoning gold, a statement for which he was chided by the opposing presidential candidate, Mr. Roosevelt. Actually, the international position of the United States, together with its ample gold stock,

¹⁸ The actual cash loss on these purchases was some \$70,000,000. The real loss to the country was much greater than this. See N. Carothers, "Silver—a Senate Racket." *North American Review*, January 1932, p. 10.

were such as to make any necessity for a departure from the gold standard remote.

Conclusion.—Because of the radical changes in our monetary system since 1932, it seems desirable, in concluding this chapter, to set up a classification of money in the United States as of the close of that year. This may be done by reproducing the classification that was given at the end of Chapter 2, with the moneys of the United States' monetary system in their proper places.

I. Full-bodied money

A. Standard gold coin (and certificates)—full legal tender

Double eagle (\$20)

Eagle (\$10)

Half eagle (\$5)

Gold certificates (\$10 to \$10,000)

II. Credit money

A. Government credit money

1. Paper promises to pay standard money

United States notes—full legal tender except in payment of import duties and interest on the public debt

Treasury notes of 1890—full legal tender **unless** otherwise specified in the contract

2. Short-weight metallic money

a. Unit and larger denominations

Silver dollars—full legal tender

Silver certificates (\$1 to \$100)—not legal tender

b. Subsidiary silver coin—legal tender to \$10

Half dollar

Quarter dollar

Dime

c. Minor coin—legal tender to 25 cents

Five-cent piece (75 per cent copper—25 per cent nickel)

Cent (95 per cent copper—5 per cent tin and zinc)

B. Bank credit money

1. Bank notes

Federal reserve notes (\$5 to \$10,000)—receivable at par for all public duties and by Federal Reserve and member banks

Federal reserve bank notes (\$5 to \$1,000)—receivable at par for all public duties and by Federal Reserve and member banks

National bank notes (\$5 to \$1,000)—receivable at par for all public duties (except duties on imports) and by all national banks.

2. Check currency

Demand deposits subject to check—not legal tender.

We must now turn our attention to the unusual monetary developments that have occurred since 1932.

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CHAPTER 6

MONETARY DEVELOPMENTS SINCE 1932

Gold standard generally approved.—The close of the year 1932 found the currencies of the world in a badly disorganized state. Only eleven countries, less than half of them important commercially, retained a full gold standard, a handful of other countries maintaining the gold parity of their currencies by means of exchange regulations and restrictions. In spite of the conditions that prevailed, there seemed to be a desire on the part of the leading countries of the world to return to the gold standard as soon as it was feasible to do so. The decision to return to gold lay largely with England, since a considerable group of countries had tied their currencies to sterling after England departed from the gold standard in September 1931; and, although the English authorities were obviously opposed to being rushed into action along this line, the aim of that country appeared to be clearly in the direction of a return to gold under satisfactory conditions.

Although a presidential campaign was under way in the United States in 1932, there seemed to be no conflict between the major political parties on the question of maintaining the gold standard. Mr. Roosevelt, the Democratic candidate for the presidency, had several times during his campaign emphasized the importance of a sound currency and President Hoover was also committed to the maintenance of the gold standard. Under these circumstances it seemed improbable that the United States would not exert every effort toward the re-establishment of the gold standard throughout the civilized world.

MONETARY DEVELOPMENTS IN 1933

Views of the Preparatory Commission of experts.—In January 1933, the Preparatory Commission of experts for

the world monetary and economic conference submitted its Draft Annotated Agenda. Although the English experts favored the restoration of commodity prices, to close the gap between prices and costs and to ease the burden of debts, as a preliminary step to the restoration of monetary stability, while the American and other gold standard delegations believed a return to gold to be a desirable first step, it was still possible for the experts to render concerted recommendations. The conclusions set forth by the Commission may be summarized as follows:

A. The Commission favored the restoration of an effective international gold standard for the countries that had departed from gold, the restoration of the gold standard to be effected at such time as conditions would permit.

B. Some increase in commodity prices was favored, with the suggestion that a general policy of easy money, designed to promote a healthy expansion of business, might be beneficial where monetary conditions made it possible to pursue such a policy.

C. The abolition of exchange restrictions and the restoration of a normal degree of international lending were advocated as essential to economic recovery.

D. Finally, greater freedom of international trade was felt by the Commission to be essential.

Although there were differences of opinion, among members of the Commission of experts, on the exact order in which these various steps should be taken, it is clear that there was substantial unanimity of judgment regarding the desirability of re-establishing the international gold standard and of restoring international trade by the abolition of exchange restrictions, import quotas, and unduly high tariff barriers.

It was accordingly felt that, following the inauguration of the Roosevelt Administration in the United States, the efforts of the Administration would be strongly in the direction of bringing order out of chaos through the hearty cooperation of the United States with other leading countries that were to participate in the forthcoming World Monetary and Economic Conference.

The banking crisis in the United States.—The inauguration of President Roosevelt, however, brought with it domestic difficulties that absorbed, for a time, the entire

attention of the new Administration. Banking difficulties in the Detroit area had resulted in the proclamation by Governor Comstock of a bank moratorium in Michigan on February 14, 1933. This was followed by similar bank holidays in other states in fairly rapid succession until, on March 3, the banks of twenty-two states were either closed or operating on an extremely restricted basis. This mounting number of statewide moratoria placed a continually increasing strain on the banks of the remaining states, including the Federal Reserve banks, and on March 4, the date of Mr. Roosevelt's inauguration, the rest of the banks of the country closed their doors.

Under these circumstances, the initial activities of the new Administration were necessarily directed toward the problem of reopening the banks. Early in the morning of March 6 the President proclaimed a four-day bank moratorium for all the banks of the country, pending the assembling of Congress in special session on March 9. Acting in the emergency under the authority of the Trading with the Enemy Act, the President forbade the exportation of gold and ordered everyone holding gold coin to turn it in at the Treasury or Federal Reserve banks in exchange for other forms of money. This action effectively removed the United States from the gold standard.

The Emergency Banking Act of March 9, 1933, confirmed the President's recent proclamations and provided machinery for reopening the banks.¹ Although a few observers were inclined to feel that the restrictions placed on the exportation and hoarding of gold were unnecessary, even for a brief interval, there was no general condemnation of the President for the action he had taken in view of the existing emergency. In the light of Mr. Roosevelt's vigorous campaign statements in regard to the gold standard, it was generally felt that the departure of the United States from this standard at the time of the banking crisis was but a temporary expedient, made necessary by the gravity of the emergency.

¹ For a discussion of the banking crisis and of the provisions of the Emergency Banking Act, see Chapter 21.

The gold embargo of April 20.—The period required for the reopening of the banks was about ten days. Only sound banks were licensed to reopen on an unrestricted basis, but, by March 15, the banks that had obtained licenses² were again in operation throughout the country. Although the final liquidation or subsequent reopening of unlicensed banks still constituted a serious problem, the acute phase of the banking crisis was definitely over by the middle of March. With the reopening of the great majority of the banks of the country, hand-to-hand money, previously hoarded, began to flow back into the banking system at a rapid rate, and there appeared to be no reason why a return to an unrestricted gold standard need be longer delayed. Actually, no action restoring the full gold standard was taken at that time, although gold exports under license were permitted if essential. Nevertheless, it was taken for granted that the country would return to gold at an early date, as is demonstrated by the fact that the exchange rate on France—a sensitive indicator of financial opinion—remained practically at the gold par until the middle of April in spite of the fact that the United States was not on the gold standard during the month in question.

Toward the middle of April, however, a somewhat powerful inflationary sentiment developed in Congress and the quick return of the United States to the gold standard became more doubtful. This doubt was re-enforced when, on April 20, the President proclaimed an embargo of indefinite duration on gold exports, following the issuance, on April 5, of new regulations against the hoarding of gold by individuals throughout the country. The gold embargo of April 20 made it obvious that a formal abandonment of the gold standard was intended, and the dollar began to depreciate rapidly on the foreign exchanges.

Washington consultations with foreign powers.—Meanwhile, arrangements had been made for consultations between President Roosevelt and a number of foreign ministers to discuss matters of importance that were slated for consideration at the World Monetary and Economic Conference. The

² These banks controlled about 90 per cent of the banking resources of the country.

Administration's change of front regarding monetary policy, as evidenced by the gold embargo of April 20, was doubtless somewhat disconcerting to the foreign envoys who were on their way to Washington, but did not interfere with holding the scheduled consultations.

The results of the Washington conferences, as released to the press, appeared, on the whole, to be very satisfactory. Agreements were reached between President Roosevelt and the envoys from England, France, and Italy that indicated that the President and all the foreign representatives favored some restoration of commodity price levels, the elimination of exchange restrictions and import quotas, and the restitution of a stable international monetary standard. In the American-English statement, however, the restoration of commodity prices was recognized as primary and fundamental, efforts in this direction to be accompanied by a moderation of existing exchange restrictions and to be followed, eventually, by the re-establishment of a stable monetary standard. In the American-French statement, on the other hand, it was agreed that the increase in prices and economic activity was to be accomplished by diminishing quotas and exchange restrictions and by re-establishing normal monetary conditions. Finally, the American-Italian statement emphasized the necessity of a return to the gold standard, to be accompanied by a relaxation of exchange and trade restrictions, the inference being that such action was considered a necessary prerequisite to a revival of business and prices. Moreover, the American-Italian statement contained an emphatic avowal of the urgency of the success of the world conference and was extremely heartening to those who had feared that the Administration might not be contemplating full co-operation with the other governments participating in the conference.

Announcement of monetary policy.—On the evening of May 7, 1933, over a nationwide broadcast, the President gave an account of his stewardship to date, and made statements that cast some light on what might be expected in the future. In the latter connection the President said:

The Administration has the definite objective of raising commodity prices to such an extent that those who have borrowed money will, on

the average, be able to repay that money in the same kind of dollar which they borrowed.

We do not seek to let them get such a cheap dollar that they will be able to pay back a great deal less than they borrowed.

In other words we seek to correct a wrong and not to create another wrong in the opposite direction. That is why powers are being given to the Administration to provide, if necessary, for an enlargement of credit, in order to correct the existing wrong. These powers will be used when, as, and if it may be necessary to accomplish the purpose.

The definite determination to raise commodity prices was first asserted in this address. The alleged necessity for higher prices was accordingly offered in explanation of the powers granted to the President in the inflation bill, then before Congress and slated to become law at an early date.

As opposed to a possible radical turn in Administration monetary policy, the President, in the same address, emphasized the importance of the agreements reached in the recent consultations with foreign powers and stressed the necessity for complete co-operation in the forthcoming World Monetary and Economic Conference to insure its success.

The Inflation Act.—The Inflation Act, to which reference was made in an earlier paragraph, appeared as Title III of the Agricultural Adjustment Act of May 12, 1933. This act gave the President the power to inflate currency and credit by practically all historically and currently known methods. By its provisions the President was authorized:

A. To direct the Secretary of the Treasury to enter into agreements with the Federal Reserve banks and the Federal Reserve Board whereby the Board would permit the Reserve banks, under such agreements, to buy obligations of the United States in the open market to the extent of \$3,000,000,000, the Reserve banks to be relieved from any penalty for a deficiency in reserves if such deficiency should result from this action;

B. To direct the Secretary of the Treasury to cause to be issued United States notes up to \$3,000,000,000 in amount should the preceding provision not give the desired results. Such notes might be issued "only for the purpose of meeting maturing Federal obligations to repay sums borrowed by the United States and for purchasing United States bonds and other interest-bearing obligations of the United States." The Secretary of the Treasury was also directed to retire notes so issued at the rate of 4 per cent per annum;

C. To fix the weights of the gold and silver dollar at such amounts as he finds necessary... and to provide for the unlimited coinage of gold

and silver at the ratio so fixed; or to reduce the weight of the gold dollar (without reference to silver) by any amount up to 50 per cent;

D. To accept silver at a price of 50 cents per ounce up to \$200,000,000 from foreign governments in payment of debts due to the United States.

The first three of the foregoing provisions were inflationary in nature. If the option given to the President thus to expand currency and credit should be fully exerted, a runaway inflation of immense proportions might develop. Consequently, the act contained two provisions aimed at control of credit expansion should such an eventuality occur. First, "the Federal Reserve Board, with the approval of the Secretary of the Treasury, may require the Federal Reserve banks to take such action as may be necessary, in the judgment of the Board and of the Secretary of the Treasury, to prevent undue credit expansion." Second, "the Federal Reserve Board, upon the affirmative vote of not less than five of its members and with the approval of the President, may declare that an emergency exists by reason of credit expansion, and may by regulation during such emergency increase or decrease from time to time, in its discretion, the reserve balances required to be maintained against demand or time deposits."

Although attention has largely been centered on the inflationary provisions of the act, it is obvious that these methods of control might become of dominating importance at a later date and were hence wisely included in the act.

These powers were not immediately used by the President and it was felt in many quarters that he would make chief use of the powers conferred upon him in reaching an agreement on the question of currency stabilization at the approaching World Conference. The opinion was reinforced by his message of May 16 to the heads of the interested foreign powers in which he again asserted the grave necessity for the success of the Conference and the international stabilization of currencies.

The abrogation of the gold clause.—Shortly prior to the opening of the World Economic Conference, Congress passed a joint resolution, which was signed by the President on June 5, 1933, abrogating the gold clause in existing governmental and private obligations. The resolution provided

that bonds, mortgages, and other contractual obligations, although stated to be payable in gold coin of existing weight and fineness, should thereafter be payable in legal tender money, and declared that "all coins and currencies of the United States (including Federal Reserve notes and circulating notes of Federal Reserve banks and national banking associations) heretofore or hereafter coined or issued, shall be legal tender for all debts, public and private. . ." This resolution merely gave legal sanction to the existing situation, and, although it came as a shock to some, it was not inconsistent with the monetary program then being followed, nor did it necessarily imperil the success of the approaching negotiations at the World Conference.

The World Monetary and Economic Conference.—The World Economic Conference convened on June 12. The currency problem presented certain difficult angles at best, but some agreement might have been reached had the United States been willing to co-operate with France and England. A tariff truce for the period of the conference had been adopted, and it was felt that a currency truce would also be desirable. The problem involved the maintenance of the gold standard by France and the restriction of the movement of British and American exchange rates within narrow limits by means of a joint or separate equalization funds and co-operative action between the central banks of the three countries. The task of the exchange experts at the conference, in working out a plan of international co-operation, was to determine the exact character of central bank co-operation necessary, to fix the limits of exchange rate fluctuation which the non-gold countries might permit, and to fix the ratios at which the dollar and the pound should be stabilized in relation to the franc.³ There were some differences of opinion on the part of England, France, and the United States with regard to the two last-named objectives, but the barriers were not wholly insurmountable. However, England and France were committed to an anti-infla-

³ Pasvolsky, *Current Monetary Issues*, pp. 66-67. The material presented in the following paragraphs is based largely on the discussion in this excellent book. While many of the facts noted are obtainable from press reports, Mr. Pasvolsky's presence in London enabled him to cast light on the subject in regard to certain points not adequately presented in the newspapers.

tion policy and requested President Roosevelt not to make use of his inflationary powers for a temporary period. The President, on the other hand, was unwilling to agree to such an undertaking.

In spite of the difficulties involved, it appeared for a time as if some agreement on the question of currency stabilization might be reached. Rumors that a stabilization agreement had been, or would shortly be, arrived at were featured in the press, with dampening effects on the speculative ardor then being displayed in the security and commodity markets of the United States. On June 15, the dollar advanced sharply and security and some important commodity prices suffered a marked decline in New York. Unfortunately, such a price reaction did not meet with the approval of the Administration and President Roosevelt ordered a discontinuance of the stabilization negotiations in London, announcing that immediate temporary stabilization appeared to the American government to be untimely.⁴

In spite of the abrupt cessation of efforts to reach a currency truce, negotiations at the conference proceeded. In these negotiations the controversy over credit and prices again came into evidence. In brief, the British position was that central banking action in the direction of easy money was desirable to promote a revival of business activity and rising prices. The French and delegates from other gold standard countries felt that confidence in the currency was the primary requisite to revival, central banking action being useful only after business and prices had begun to recover. The United States, on the other hand, was committed to a program of price raising as a means of recovery, the theory being that prices had to be increased as an antecedent to business revival.

Obviously, in the light of these divergent views, no really definite agreement was possible. However, on the initiative of the gold standard countries, a plan for an innocuous joint declaration on monetary policy was discussed and generally approved by the delegates. In brief this declaration asserted the agreement of non-gold-standard signatory countries to

⁴ *Ibid.*, pp. 69-70.

stabilize on a gold basis at such times and parities as they should see fit, and of the gold standard countries to maintain the free gold standard at existing parities.

Clearly this declaration was little more than a general statement of objectives that practically any country intending to return eventually to the gold standard might sign without compunction. It received the approval of the American delegation as well as that of Professor Moley, who had come to the conference as a special emissary of the President. The text of the declaration was accordingly submitted to President Roosevelt for approval on June 30, with a general belief that it would receive his support. It was a great shock, therefore, when the President, in a message addressed to the Conference, rejected American participation in the agreement in no uncertain terms. In this message he asserted that "the sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations." He also reaffirmed the intention of the United States to raise commodity prices (presumably to the pre-depression level) and then to stabilize them for a generation.

This message, in refusing bluntly to co-operate toward the attainment of monetary stabilization, was successful in scuttling the conference. By indicating an intention to work toward a commodity dollar, the President effectively barred taking any further steps toward stabilization of exchange rates. Although half-hearted attempts to reach agreements in other directions were made, the fact that currency and exchange stabilization were of primary importance made the practical termination of the Conference inevitable.

Developments following the conference.—Following the President's message to the conference, certain actions that are deserving of mention were taken in the international monetary field. The gold standard countries—France, Belgium, Holland, Switzerland, Italy, and Poland—formed what became known as the gold bloc by adhering to a declaration to maintain the free gold standard at existing parities in their respective countries.

The countries concerned felt that this action would be

beneficial to themselves and that the gold bloc would form a basis from which to work in the event of a subsequent return of the non-gold countries to the gold standard.

Representatives of countries forming the British Commonwealth of Nations signed a statement reaffirming the resolutions with respect to monetary policy that had been adopted previously at the Ottawa Conference. The statement declared that "the ultimate aim of monetary policy should be the restoration of a satisfactory international gold standard . . . with a view to avoiding, so far as may be found practicable, undue fluctuation in the purchasing power of gold." It was also stated that stability in world prices, not merely the price level of a particular country, was the monetary problem confronting the nations of the world.

Monetary developments in the United States.—Following the adjournment of the World Conference, the United States followed a policy of inaction in monetary affairs for a number of months. Externally, dollar exchange rates fluctuated in response to market and speculative forces, the government making no concerted attempt to limit or control these movements. The result was that the rate for French exchange, which had risen above 5.50 cents about the middle of July, fell to near 5.25 cents in August and thereafter rose irregularly to 6.00 cents at the end of September. This represented a depreciation of the dollar at the latter date of approximately 37 per cent. The franc rate then fell to 5.50 cents shortly before the Gold Purchase Plan was instituted by the Administration on October 25.

Internally, the monetary policy of the government was also one of *laissez faire*, the attention of the Administration being concentrated on its N.R.A. and A.A.A. programs during these months. Meanwhile, between June and October, the B. of L. S. wholesale price index showed a moderate increase from 65 to 71 per cent of the 1926 price level. In order to protect American producers of gold and to stimulate domestic gold production, the President, on August 29, 1933, issued an executive order authorizing the Secretary of the Treasury to buy newly mined domestic gold at the best price obtainable in the free gold markets of the world. Prior to this time, domestically mined gold could be sold

only at the statutory price of \$20.67 per ounce, whereas gold was commanding a substantially higher price in the free gold markets.

The only inflationary action taken prior to the inauguration of the Gold Purchase Plan was the purchase of substantial amounts of open market securities by the Federal Reserve banks. Reserve bank holdings of United States securities rose from \$1,837,000,000 on May 17 to \$2,400,000,000 on October 25. These purchases, however, were apparently undertaken by the Reserve banks independently of the provision for open market purchases contained in the Inflation Act.

The Gold Purchase Plan.—It was evident, by October 1933, that the action of the Federal Reserve banks in the purchase of government securities was not alone sufficient to bring about a rise in commodity prices of the extent desired by the Administration. Although the wholesale commodity price level had risen a trifle more than 9 per cent from June to October (65 to 71), as already noted, it was still substantially below the 1926 level, which was generally thought to be the desideratum of the Administration. Moreover, the prices of farm products, which had risen from a low of 41 in February to 60 in July, had receded to 56 by October, while prices of commodities other than farm products and foods had risen between July and October by 11.5 per cent, thus again widening the gap between prices of agricultural and other commodities.

As a result of the downward tendency in farm prices from the July peak, demands for a more vigorous inflationary policy were heard from the agricultural sections. The general opinion in these parts seemed to be in favor of the issuance of greenbacks, under the provisions of the Inflation Act, or a remonetization of silver, or both. Another powerful group, however, including the Committee for the Nation⁵ and the President's chief monetary advisor, Professor Warren, preferred devaluation to currency inflation as a price-raising mechanism. The influence of the devaluationists was apparently the more powerful with the President, for the next major step in the country's monetary policy, the Gold Purchase Plan, while not technically constituting de-

⁵ A Committee of industrialists favoring "reflation of prices."

valuation, was obviously precedent to a later devaluation of the traditional dollar unit.

In a radio address on October 22, 1933, President Roosevelt reasserted the policy of the Administration to raise and then stabilize commodity prices and announced the nature of the plan and his reasons for inaugurating it in the following words:

Because of conditions in this country and because of events beyond our control in other parts of the world, it becomes increasingly important to develop and apply further measures which may be necessary from time to time to control the gold value of our own dollar at home.

Our dollar is now altogether too greatly influenced by the accidents of international trade, by the internal policies of other nations and by political disturbance in other continents.

Therefore the United States must take firmly in its own hands the control of the gold value of our dollar. This is necessary in order to prevent dollar disturbances from swinging us away from our ultimate goal, namely, the continued recovery of our commodity prices.

As a further effective means to this end, I am going to establish a government market for gold in the United States. Therefore, under the clearly defined authority of existing law, I am authorizing the Reconstruction Finance Corporation to buy gold newly mined in the United States at prices to be determined from time to time after consultation with the Secretary of the Treasury and the President. Whenever necessary to the end in view, we shall also buy or sell gold in the world market.

My aim in taking this step is to establish and maintain continuous control.

This is a policy and not an expedient.

It is not to be used merely to offset a temporary fall in prices. We are thus continuing to move toward a managed currency. . .

The plan thus announced was put into operation on Wednesday, October 25, the official price of newly mined gold for that day being fixed at \$31.36 per ounce, a figure only slightly in excess of the world price. The subsequent depreciation of the dollar through raising the price of gold is indicated in the accompanying table, which shows changes in the official price from October 25, 1933, to January 31, 1934, the period during which the plan was in operation.

Thus the United States willfully depreciated its currency for the purpose of raising the level of commodity prices,

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it being the belief of the Administration advisors, especially Professor Warren, that the price level would respond reasonably promptly and accurately to changes in the price of gold.

TABLE 1

CHANGES IN THE OFFICIAL PRICE OF GOLD UNDER THE GOLD PURCHASE PLAN OCTOBER 25, 1933 TO FEBRUARY 1, 1934

1933-October	25	\$31.36	1933-November	10	\$33.20
	26	31.54		11	33.32
	27	31.76		13	33.45
	28	31.82		14	33.56
	30	31.96		20	33.66
	31	32.12		21	33.76
November	1	32.26		28	33.85
	2	32.36		29	33.93
	3	32.57	December	1	34.01
	4	32.67		18	34.06
	6	32.84	1934-January	16	34.45
	8	33.05	February	1	35.00
	9	33.15			

Source: *Federal Reserve Bulletin*, November, December, 1933; January, February, 1934. Only dates on which the official price was changed are given in this table.

Failure of the plan.—Before long it became clear that the Gold Purchase Plan was not going to effect the desired objective. The B. of L. S. all commodities index, which stood at 71 (1926=100) for September, remained at this figure during October, November, and December, rising one point, to 72, in January 1934. The index for farm products stood at 56 in October, 57 in November, 56 in December and 59 in January. The index of commodities other than farm products and foods stood at 77 in October and November, and at 78 in December and January.

Protests by "sound money" advocates.—No sooner had the Gold Purchase Plan been put into operation than it aroused a storm of protest from sound money advocates throughout the country. The first of these protests, in point of time, was not directed against the Gold Purchase Plan specifically, since it was mailed to the President on the afternoon of October 22, before the radio address in which the

new plan was announced. It consisted of a letter, signed by forty-four of the leading students of currency problems throughout the country, which stated the belief of the signers that inflation of the currency would injure the nation and that recovery would be attained most quickly by a return to the gold standard.

In addition, other groups of experts protested the monetary policy of the Administration after the inauguration of the Gold Purchase Plan. These included a letter from twelve noted midwestern economists on November 2, and subsequent letters from economists at Yale, Columbia, and other specific institutions. Leading Chambers of Commerce and other business and financial organizations added their protests to those of the experts.

Added weight was given to the objections of the sound money supporters by the resignation, on November 16, 1933, of Dr. O. M. W. Sprague, who had been persuaded to leave his position as economic advisor to the Bank of England to act as expert advisor to the President and Treasury. Dr. Sprague felt, in view of the unwise policy that the Administration was pursuing, that he could do more good by attempting to educate the public than by remaining in his official position.

The attitude of the President toward the appeals of the sound money adherents, as toward the counsels of Dr. Sprague, was one of complete indifference. It was clear from this attitude that President Roosevelt intended to carry through his monetary experiment in spite of the criticism and protests of a large majority of the country's leading experts. The failure of the commodity price level to respond at all promptly to the manipulation of the price of gold, however, led the President, in January 1934, to look favorably upon at least a temporary stabilization of the dollar on a gold basis. He had the power under the Inflation Act to devalue the dollar by any amount up to 50 per cent, but apparently preferred to share his responsibility in taking such a step with Congress. Moreover, he desired the nationalization of all the monetary gold of the country, a procedure that required legislative sanction not contained in the Inflation Act. Accordingly, in response to the Presi-

dent's wishes, Congress passed the Gold Reserve Act of 1934, which became law on January 30.

DEVELOPMENTS IN 1934

Provisions of the Gold Reserve Act of 1934.—The Gold Reserve Act of 1934 vested the legal title to all gold held by the Federal Reserve banks or Federal Reserve Board (in their own right) in the United States Treasury. Since no monetary gold was legally held outside the Federal Reserve banks and Board at the time of passage of this act, this provision vested the title to all of the monetary gold of the country in the Treasury. The act further provided that in exchange for this gold the Reserve banks were to be given credits on the books of the Treasury or gold certificates. Then followed a series of amendments to the Federal Reserve Act in which the words "gold certificates" were substituted for the word "gold" wherever the latter appeared in connection with reserve requirements, security requirements, etc.

Section 3 of the act authorized the Secretary of the Treasury, with the approval of the President, to issue regulations prescribing the conditions "under which gold may be acquired and held, melted or treated, imported, exported, or earmarked: (a) for industrial, professional, and artistic use; (b) by the Federal Reserve banks for the purpose of settling international balances; and, (c) for such other purposes as in his judgment are not inconsistent with the purposes of this Act." Provision was made, further, for the confiscation by the United States of gold not legally held. No gold was to be coined by the mints except for the account of foreign countries, and the Treasury was required to hold its reserve against United States notes and Treasury notes of 1890, and its backing for gold certificates, in the form of gold bullion.

In the event of a reduction in the weight of the gold dollar, it was provided that the "profit" resulting from the devaluation should accrue to the Treasury, while, should the weight of the dollar be subsequently increased, the Treasury must stand the loss. The act gave the Secretary of the Treasury the power, with the President's approval, to buy and sell gold, at home and abroad, with any direct obligations, coin, or currency of the United States, authorized by

law, or with any funds in the Treasury not otherwise appropriated, at such rates and under such conditions as he deems to be in the public interest.

The act created a fund of \$2,000,000,000 out of the profit from devaluation, when available, to be used to stabilize the exchange value of the dollar, and authorized the Secretary of the Treasury to deal in gold and foreign exchange in administering this fund, which was given the title of a stabilization fund. Any profit in excess of \$2,000,000,000 resulting from devaluation was to be turned into the general fund of the Treasury. Such portion of the stabilization fund as was not needed for stabilizing the exchanges might be invested or reinvested in obligations of the United States in the open market.

The act amended the Inflation Act of May 12, 1933, by authorizing the President to reduce the weight of the gold dollar by not less than 40 per cent and not more than 50 per cent. The President was also given the power to revalue the gold dollar, within the specified limits, from time to time if deemed expedient. This latter power, and the provision authorizing the operation of the stabilization fund, were limited to two years' duration unless the President should find it necessary, by reason of a continuance of the emergency, to extend them for an additional year.

The President was authorized, in his discretion, to reduce the weight of the silver dollar in proportion to the devaluation of the gold dollar, to reduce the weight of subsidiary silver coins, to cause silver certificates to be issued against silver bullion held by the Treasury, and, in the event of a return to bimetallism, to give silver certificates in exchange for silver bullion to holders or producers of silver.

Certain other miscellaneous provisions were contained in the act, but they are not especially pertinent to the present discussion and will not be enumerated.

The devaluation of the dollar.—Acting under the authority of the act of May 12, 1933, and the Gold Reserve Act of 1934, President Roosevelt, on January 31, 1934, by proclamation fixed the weight of the gold dollar at 15 $\frac{5}{21}$ grains nine-tenths fine. This was a reduction of 40.94 per cent in the gold content of the dollar, the new dollar con-

taining 59.06 per cent of 25.8 grains nine-tenths fine. The price of gold was thus fixed at \$35.00 per ounce. Following the proclamation fixing the new weight of gold in the dollar, Secretary of the Treasury Morgenthau, as authorized by the law, issued a series of regulations regarding the purchase and sale of gold by the mints and the purposes for which gold might be used and/or obtained by purchase from the mints.

Under these regulations gold could be obtained or held in limited quantities for use in the arts, the professions, and industry without a license, and in larger amounts with a license. The Federal Reserve banks were given permission to redeem gold certificates in gold bullion, in such amounts as the Secretary of the Treasury should deem necessary, to settle international balances or to maintain the parity of moneys of the United States with gold. Gold also might be obtained for certain other purposes not inconsistent with the intent of the law. The mints were authorized to purchase gold legally offered at \$35.00 per fine ounce less $\frac{1}{4}$ of 1 per cent and mint charges, and to sell gold, as permitted under the regulations, at \$35.00 per fine ounce plus $\frac{1}{4}$ of 1 per cent.

It was frequently stated, at the time these regulations were put into effect, that the United States had adopted a gold bullion standard. This statement is not precisely correct. The requirements of the gold bullion standard are that gold be freely purchased in exchange for currency in unlimited quantities at a fixed price and that gold bullion be sold for currency at the same price to anyone wishing to obtain gold without regard to the use to which the gold so purchased may be put. It is improper to designate as a gold bullion standard an arrangement that permits the President to vary the gold content of the dollar within fairly wide limits from time to time and that allows the Secretary of the Treasury, with the President's approval, to restrict, by regulation, the purchase, sale, and use of gold bullion. The most that can be said is that the regulations described above placed the country for the time being on a sort of qualified or limited gold bullion standard.

Purpose of devaluation in U. S.—Devaluation is a device that may be used to increase state revenues, to adjust the

metallic weight of the money unit to a permanently higher price level, to stimulate exports, or to effect an increase in the price level. From the utterances and writings of President Roosevelt in 1933, it seems unquestionably true that the object of the Administration in devaluing the dollar was to bring about a substantial rise in the commodity price level. In May, July, and October, the President had voiced this purpose of the government in clear and concise terms. Moreover, Mr. Roosevelt's chief monetary advisor, Professor Warren, was known to believe that "by reducing the weight of gold in the dollar, any desired price level can be established."⁶ In view of these facts, the conclusion that devaluation was resorted to as a price-raising device is unmistakable.

The results of devaluation.—If it was hoped that the process of devaluation would result in a prompt and approximately proportionate rise in the commodity price level, the results in the first five months following the President's proclamation of January 31, 1934, were decidedly disappointing. The B. of L. S. index, which stood at 72 in January 1934, had reached 74.8 only by the week of June 30. Moody's daily index of staple commodity prices, on the other hand, rose from a 1934 low of 126 on January 2 to 136.1 on June 1 and by the end of June had advanced to 140.4. As a measure of the general commodity price level, however, the B. of L. S. index is superior to Moody's and the results of devaluation in lifting prices, as measured by the former index, were negligible. Moreover, a part of the increase in the first half of 1934 was clearly the result of higher grain prices, brought about by the drought. To the extent that the increase arose from this source, it would have occurred whether the dollar had been devalued or not.

From the middle of 1934 to April 1937, the B. of L. S. index rose irregularly to a high point of 88. Thereafter it declined to 75 in August 1939, recovered somewhat in the latter months of that year and reached 80 in December 1940. The first six years of the devalued dollar, therefore, did not indicate any great success in restoring commodity prices to the pre-depression level.

⁶ Quoted from Warren and Pearson, *Prices*, by W. E. Spahr in *The Monetary Theories of Warren and Pearson*, p. 3.

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Gold policy in 1934.—Following the official devaluation of the dollar at the end of January 1934, the Administration, for the most part, followed a *laissez faire* policy concerning gold during the remainder of the year. The dollar was substantially undervalued in relation to foreign currencies, and large imports of gold into the United States resulted. Imports were heaviest in the two months following the devaluation⁷ but continued throughout the year with the exception of one month when a step in the Administration's silver program led to a weakening of the dollar and a small net export of gold. From February to December inclusive, net gold imports, in terms of the devalued dollar, totaled \$1,133,912,000, bringing the country's gold stock up to a record high figure, even in terms of the old gold dollar.

Aside from a presumable occasional use of the stabilization fund to steady the foreign exchange position of the dollar, the chief action taken by the Treasury in the course of the year was the regulation of November 12, which lifted the restrictions theretofore imposed on transactions in foreign exchange other than the export of gold or gold certificates. This was generally hailed as a move toward sound money and did, without question, place the country more nearly on a gold bullion standard than had previously been the case.

Renewal of sound money agitation.—In the closing months of 1934, a pronounced renewal of the agitation for a return to a full gold standard took place. The Federal Advisory Council, the American Management Association, the National Association of Manufacturers, the Chamber of Commerce of the State of New York, and others drew up statements or resolutions of varying forcefulness advocating a restoration of the gold standard in the United States. As in the past, these pronouncements received little or no recognition at Washington, but were significant as an indication of the desire, on the part of important business groups, for a definite stabilization of the dollar on a fixed gold basis.

⁷ Net imports of gold for February and March amounted to \$689,907,000 at the new par. *Federal Reserve Bulletin*, April 1935, p. 227.

DEVELOPMENTS IN 1935

The Gold Clause Cases.—The outstanding event of the year 1935, in the Administration's monetary policy, was the decision of the Supreme Court in the Gold Clause Cases. The decision was of the highest importance since it determined the constitutionality of the Resolution of June 5, 1933, which abrogated the gold clause in public and private contracts.

Four separate cases were included in this group. Two were by holders of railroad bonds bearing the gold clause. One was by the owner of a Liberty bond. In the fourth case, the plaintiff was the former holder of a certain sum in gold certificates that he was required to turn in in exchange for other forms of money. The arguments presented by counsel for the plaintiffs were based on the principle of the sanctity of contracts. Since the bonds or certificates contracted to pay the holders in gold coin of the former weight and fineness, and since gold was not obtainable under the government policy, it was claimed that the holders of these obligations were entitled to \$1.69 in legal tender currency for each dollar face value of the obligations held.

It was clear that the decision of the court would be of vital importance. Should the court decide in favor of the plaintiff in every instance, it would mean either that debts totaling around \$100,000,000,000, bearing the gold clause, would require the payment of \$169,000,000,000 by the debtors, or that the government would have to revalue the dollar upward to its former weight in order to avoid this contingency. If, on the other hand, the court found the abrogation of the gold clause constitutional in private contracts, but illegal on government bonds, it would still mean the payment of \$1.69 per \$1.00 by the government on some billions of its obligations containing the gold clause. This would have meant an increase in the burden of the Federal debt alone of roughly \$10,000,000,000, an outcome that naturally did not appeal to the Administration.

The Supreme Court began its hearings in the gold cases on January 8, 1935, and rendered its decision on February 18, two weeks later than had been anticipated. During the early part of the hearings little attention was paid to the

cases by the financial community. As time went on, however, the development of a critical attitude on the part of a number of the justices toward the evidence of the government's counsel aroused the apprehension of the Administration and others of the likelihood of an adverse ruling by the court. These apprehensions were not greatly assuaged by a postponement of the decision by the court on two successive weeks, for this clearly indicated the difficulty the court was experiencing in arriving at an opinion.

Accordingly, for about a month before the decision was finally rendered, the gold cases were much in the public eye. Financial markets were unsettled. The foreign exchange market was disrupted with large takings of gold abroad for importation into the United States before a decision was arrived at. Legal advisors of the Administration were at work devising ways and means of circumventing a possible adverse decision by the court.

There was much discussion of what the effects of a decision adverse to the government would be. Obviously, to require the payment of \$1.69 per \$1.00 of gold clause indebtedness would prove ruinous. Economically it would have been possible to meet the contingency with a minimum of disturbance by a revaluation of the dollar upward to the old weight.⁸ This was even suggested by certain Treasury experts, but was not acceptable to the Administration, which preferred to escape the effects of an adverse decision by more devious means, even to amending the Constitution if necessary.

As it turned out, the decision was a victory for the government, although it is difficult to see how the Administration could have derived much spiritual satisfaction from it. Regarding private debts, the court ruled that to uphold the gold clause would be to allow private contracts to interfere with the government's constitutional power to regulate the value of money. The resolution of June 5, 1933, was accordingly upheld in private contracts.

In the case of the government's own obligations containing the gold clause, all nine of the justices concurred in holding

⁸ In this connection, see an excellent editorial by D. W. Ellsworth, *The Annalist*, January 18, 1935.

the resolution of June 5, 1933, unconstitutional. Nevertheless the court, although divided on this point, refused to award damages on the ground that the "plaintiff has not shown or attempted to show that in relation to buying power he has sustained any loss whatsoever." As to the holder of gold certificates, the court maintained that, had he obtained the gold, it could legally have been neither exported nor used in any way worth more to him than paper money would be. Consequently, it refused to award damages on the ground that no loss had been shown.

The decision was rendered by a 5 to 4 vote, the dissenting opinion opposing that of the majority in every particular except the unconstitutionality of the government's repudiation of its own contracts. Associate Justice McReynolds, delivering an impromptu summary of the dissenting opinion, bitterly attacked the majority opinion in a scathing philippic from the bench.

It is not yet possible to appraise fully the ultimate future effects of this decision. By bringing in the concept of "buying power," the court departed from all precedent, and, incidentally, left the way open for future suits against the government in cases where a loss of buying or purchasing power could be demonstrated. Because of this, at the recommendation of the President, Congress closed the Court of Claims to suits of this sort by a Joint Resolution, approved August 27, 1935.

DEVELOPMENTS SINCE 1935

The tripartite monetary agreement.—The effect of the decision in the gold cases was to relieve the Administration of further immediate worry regarding its monetary arrangements. Some of the zealous Congressional inflationists, instead of taking the decision as a well-merited rebuke, seemed to feel that it gave the government *carte blanche* to devalue the dollar further and proposed such a step. The Administration, however, was apparently not agreeable to further tinkering in this direction for it continued to maintain the existing status of the dollar.

In March, the pound sterling developed a sudden weakness, thus placing an added strain on the gold bloc countries,

which up to this time had been able to maintain the gold value of their monetary units in accord with their joint declaration in the summer of 1933. In this month a crisis developed in Belgium, which was finally forced to devalue the belga by about 27 per cent after a valiant but ineffectual struggle. Italy and Poland also had earlier been forced to adopt systems of exchange control, but the remaining gold bloc countries, although subject to some added strain as a result of Belgium's action, were enabled to maintain their previous status until the fall of 1936.

In the summer of 1936, France was subjected to recurring crises involving large gold losses and finally, on September 25, the Blum Government in France let it be known that it would ask Parliament to devalue the franc between certain limits, averaging about 30 per cent. Simultaneously, it was announced in Paris, London, and Washington that the governments of France, Great Britain, and the United States agreed in the interests of peace and international relations that the greatest possible stability in the currencies of the three countries should be maintained and that they would use all appropriate and available resources to that end.

To make this agreement effective, it was necessary to arrange some method of shipping gold between the countries concerned. Accordingly, on October 12, Secretary of the Treasury Morgenthau issued a supplementary announcement to the effect "that (hereafter, and until, on twenty-four hours notice, this statement of intention may be revoked or altered) the United States will . . . sell gold for immediate export to, or earmark for the account of, the exchange equalization or stabilization funds of those countries whose funds likewise are offering to sell gold to the United States, provided such offerings of gold are at such rates and upon such terms and conditions as the Secretary may deem most advantageous to the public interest."

The price set for the sale of gold was the existing price of \$35.00 per ounce plus $\frac{1}{4}$ per cent handling charges, although it was emphasized by the Secretary that this price was subject to change upon twenty-four hours notice if deemed necessary to the public interest. The countries originally included in the agreement were France, Great Britain, and the United

States, but, on November 24, the Treasury announced that Belgium, Switzerland, and The Netherlands had signified their willingness to comply with the agreement and were added to the list.

The action of France, which was followed by Switzerland and some other countries, marked the end of the gold bloc. Nevertheless, the agreements just described made a beginning toward international monetary stabilization and they undoubtedly made possible the revaluation of the gold bloc currencies with less disturbance than would otherwise have occurred. In spite of doubts regarding certain aspects of the agreements there was cause for hope that they might mark the beginning of a movement toward the restoration of a workable international gold standard. The outbreak of war in Europe in September 1939, however, blasted any such hope. The belligerent countries departed from any semblance of a gold standard and further attempts at international monetary collaboration had to await the outcome of the war.

Domestic developments prior to World War II.— Domestically the situation remained substantially unchanged after the entry of the United States into the tripartite agreement. In December 1936, shortly after the agreement was consummated, the Treasury undertook to sterilize gold imports in order to assist the Board of Governors of the Federal Reserve System in preventing too great an increase in the excess reserves of member banks. A recession in business brought about the abandonment of this policy in the spring of 1938. The sterilized gold in the inactive fund was desterilized and no attempt was thereafter made to keep incoming gold from adding to bank reserves.

On January 19, 1936, the President, by proclamation, extended the life of the stabilization fund and his right to devalue the dollar to 50 per cent of its old weight to January 30, 1937, on the ground that the emergency in international exchange still existed. On January 19, 1937, Congress extended these two provisions to June 30, 1939. Again, on July 6, 1939, in the face of intense opposition in Congress, the Administration forced through a bill, several days late, extending these powers, once again, to June 30, 1941. An act of that date extended them for two more years. Finally, on

June 30, 1943, the President's power to alter the weight of the gold dollar was allowed to lapse, although the stabilization fund was continued.

The Bretton Woods agreements.—Although the tripartite agreement ceased to function as soon as war began in Europe, plans for postwar monetary stabilization were started in the spring of 1943, with the publication of the White (American) plan on April 6, followed two days later by the Keynes (British) plan. A French plan was made public on May 9, and the Canadian experts submitted a proposal on June 9. A revised edition of the White plan was issued on August 19, after discussion with experts of other nations. These various plans were studied by experts of some thirty nations and a joint statement was prepared as a basis of discussion and action at the Bretton Woods conference, which was held at Bretton Woods, N. H., in July 1944.

The agreements reached at Bretton Woods by delegates from forty-four participating nations provided for the establishment of an International Monetary Fund and an International Bank for Reconstruction and Development. The purposes of the Fund were several, but the general intention was to establish a permanent institution aiming at international monetary co-operation and the attainment thereby of the greatest possible stability in foreign exchange rates, the lessening of disequilibrium in the international balances of payments of members, and the balanced growth of international trade.

A discussion of the technical aspects of the Fund and the mechanics of its operations may best be deferred until a later chapter after some attention has been devoted to the subject of foreign exchange. At this point it will be sufficient to note that the Fund has been established with headquarters at Washington, D. C., and that thirty-five countries had become members by the end of 1946, Russia being the chief large country which, although represented at Bretton Woods, has not accepted membership in the Fund.

The International Monetary Fund is thus much more comprehensive in membership than was the tripartite agreement. With what degree of success it will be able to function will be determined by the course of world events coupled

with the extent to which co-operation among its members can be developed.

SILVER MONETARY DEVELOPMENTS SINCE 1932

The World Economic Conference agreement.—In this period of monetary experimentation under the Roosevelt Administration, the silver interests never stopped attempting to obtain legislation that would, in the current phrase, “do something for silver.” The silver provisions of the Inflation Act and the Gold Reserve Act of 1934 have been set forth in earlier pages and need not be repeated. One of the minor accomplishments of the World Economic Conference had been the negotiation of an agreement among the sixty-six participating nations to the effect that these governments would abandon the policy of melting or debasing silver coins below a fineness of .800 and would substitute silver coins for low value paper currency when and if conditions should permit. Moreover, the United States entered into a supplemental agreement between the chief users and chief producers of silver under which the five major producing countries agreed to absorb and keep off the market, for a period of four years, silver in the amount of 35,000,000 ounces, of which the share allotted to the United States was 24,421,410 ounces. The silver-using countries, on the other hand, agreed not to dispose of more than certain limited amounts of silver annually during the period in question.

In spite of the provisions of the Inflation Act and the conference agreement, no action affecting silver was taken by the President until the end of the year. On December 21, 1933, by proclamation, Mr. Roosevelt authorized the mints to accept for coinage into silver dollars domestically produced silver. The mints were to levy a seigniorage charge of 50 per cent; that is, one-half of the silver presented at the mints was to be coined into dollars and returned to those offering the silver for coinage. The other half was to be retained by the Treasury. This meant that for each ounce of silver presented at the mint for coinage, the party presenting the silver would receive legal tender silver coin having a value of \$0.64½. In other words, the proclamation fixed the domestic price of silver at 64½ cents per ounce.

Since this was well in excess of the market value of silver at the time, the result of the proclamation was to furnish a subsidy of substantial amount to the silver interests.

The Silver Purchase Act of 1934.—Those intent on doing something for silver were not, apparently, satisfied with the proclamation of December 21, 1933. Several different silver bills were introduced into Congress in the spring of 1934, but did not meet with the approval of the President. Finally, however, Mr. Roosevelt was either won over by the silver supporters or capitulated to their pressure, and, on June 19, 1934, he approved the Silver Purchase Act of 1934.

The act authorized and directed the Secretary of the Treasury to buy silver at home and abroad at such times, rates, and terms as he deemed to be in the public interest, except that such purchases were not to be made at a price higher than the monetary value and at not more than 50 cents per ounce for silver in the United States. The Secretary of the Treasury was also authorized to sell silver, with the approval of the President, whenever the market price should exceed the monetary value, or whenever the government's stock of silver should exceed 25 per cent of the total monetary stock of gold and silver. Silver might not be sold, however, if such sales would reduce the security required behind silver certificates. The act also authorized and directed the Secretary of the Treasury to issue silver certificates, the face value of the certificates to be not less than the cost of all the silver bought under the act. Silver certificates were made legal tender and redeemable on demand in silver dollars.

The remaining provisions gave the government control over the acquisition, importation, exportation, or transportation of silver under certain circumstances, and authorized the President to combat silver hoarding by requiring the delivery of silver to the mints, regardless of ownership and location of the silver. A transfer tax on refined silver in bullion form was also provided under the terms of the act.

Treasury operations in silver.—After the passage of the Silver Purchase Act, the Administration began to buy some silver in accordance with its provisions. There was little public notice of the operation of the law, however, until August 9, 1934, on which date the President, as authorized

by the act, took steps to nationalize silver. By executive order, he required the delivery to the Treasury, within a ninety-day period, of all silver situated in the United States on the date in question at a price of 50.01 cents per fine ounce. The order did not apply to foreign or domestic coins, newly mined domestic silver, or manufactured silver articles, but was designed rather to acquire the stock of silver held by speculators in this country.

This action appeared inflationary to the financial community. The dollar weakened in the foreign exchange market, some gold was exported to foreign countries, and prices of government bonds broke badly, although they subsequently recovered.

Later in the year the Treasury pushed its silver purchases abroad actively with the result that China suffered acute embarrassment through the loss of silver from her reserves to the United States. The Chinese government appealed to the United States to desist in her silver purchases, but Secretary of State Hull replied to the effect that the law was mandatory and, consequently, that it was not possible to refrain from further purchases.⁹ As a result of this attitude on the part of the United States, China was forced to establish a customs tax on exports of silver plus an equalization charge to cover any discrepancy between the parity on London silver and the rate of exchange fixed by the Central Bank of China. This proved ineffective, however, and in November 1935, China was finally forced to abandon the silver standard.

The result of the Administration's silver policy up to the end of 1934 was to increase the government's holdings of silver by approximately 317,400,000 ounces, which represented 21,400,000 ounces of domestic production, bought at 64.5 cents per ounce; 111,000,000 ounces of nationalized silver stocks, bought at 50.1 cents per ounce; and 185,000,000 ounces of open market purchased at varying prices.¹⁰

Handy & Harman estimate that government stocks of silver at the close of 1934 totaled 1,003,000,000 ounces.

⁹ Since the act directed the purchase of silver by the Secretary of the Treasury at such times, rates, and terms as he deemed to be in the public interest, this reply hardly seemed well founded.

¹⁰ These estimates are from Handy & Harman's *Annual Review of the Silver Market* for 1934.

Gold holdings at the end of the year amounted to \$8,230,000,000. Since the Silver Purchase Act contemplates the acquisition of silver by the government with a coinage value equal to one-third of the monetary gold stock, the amount of silver necessary to fulfill the requirements of the law at the close of 1934 was 2,125,000,000 ounces.¹¹ Consequently, at that date, the Administration was faced with the necessity of acquiring over 1,000,000,000 ounces of silver, in addition to existing holdings, to comply with the provisions of the law.

Purchases of silver were continued in 1935 and, by early April, the world price of silver had climbed nearly to 64.5 cents, the price at which the Treasury had been purchasing newly mined silver from domestic producers. Accordingly, on April 10, 1935, the President increased the Treasury price of domestic silver to 71.11 cents per ounce by reducing the seigniorage charge from 50 to 45 per cent. Speculation soon sent the world price of silver above this figure and again, on April 23, the Treasury price was lifted, to 77.57 cents per ounce. Again speculative forces boosted the price of silver to above 80 cents, but the Treasury refused to raise its price further and the price of silver in the outside market thereupon receded below that fixed by the Treasury. Although the price of silver had fallen to around 45 cents by the end of the year and remained close to that figure during 1936, the Treasury continued to buy silver from domestic producers at the 77.57-cent figure that had been set on April 23, 1935.

On December 31, 1937, at the expiration of the eight-nation pact relative to the purchase and sale of silver, the President, by proclamation, continued purchases of domestically mined silver, but reduced the price from 77.57 cents to 64.64 cents per ounce. This price remained in force until the passage of the act of July 6, 1939, which, by statute, required the payment of 71.11 cents per ounce for domestic silver. The act of July 6 did not amend the Silver Purchase Act, so that foreign silver continued to be subject to purchase by the Treasury.

After 1934, then, the Treasury purchased both foreign

¹¹ *Ibid.*, p. 43.

and domestic silver continuously. The results of the purchase program up to the close of 1940 are summarized so clearly and concisely by Handy & Harmon in their 25th Annual Review of the Silver Market for 1940 that we shall quote the following paragraphs which cannot be improved upon:

We estimate United States Government acquisitions during 1940 at 203,100,000 ounces, the smallest annual total since the silver buying program was undertaken seven years ago. Of this amount 67,100,000 ounces were derived from domestic ores, and the balance of 136,000,000 ounces represented foreign silver purchased under inter-government agreements and in the open market, plus some 780,000 ounces received in miscellaneous deposits at the mints and assay offices. Our estimate of Treasury silver holdings at December 31st, 1940, is 3,135,000,000 ounces, being the sum of the holdings on hand at the beginning of 1940 plus the 203,100,000 ounces acquired during the year.

The enormous additions to the gold stocks of the United States have prevented any progress for the year towards meeting the provision of the Silver Purchase Act that "one-fourth of the total monetary value of the gold and silver stocks shall be in silver." The percentage of silver to the total has declined during 1940 from about 18% to 15½%, and, even if not another dollar's worth of gold were added to the twenty-two billion now on hand, it will be necessary to purchase a further 2,535,000,000 ounces of silver in order to reach the goal set by the Act.¹²

The utter futility of the Silver Purchase Act of 1934 is only too apparent. Up to our entry into World War II, its chief accomplishments were to drive China from the silver standard and to dilute the money of the United States with a mass of unneeded and unwanted short-weight silver.

During the war, some of the silver seigniorage that had been accumulated by the Treasury was leased or sold to industry, and the act of July 31, 1946, also authorizes the sale or lease of such silver to industry at a minimum price of 90.5 cents per ounce. This latter act fixes the seigniorage to be deducted by the Treasury at 30 per cent on purchases of domestic silver, so that domestic silver interests now obtain 90.5 cents per ounce for newly mined silver instead of 71.11 cents as under the act of July 6, 1939.

¹² Pp. 8-9.

THE PRESENT MONETARY SYSTEM

Kinds of money.—In concluding this discussion of monetary developments since 1932, it will be well to summarize the changes that have occurred in the system by considering its present characteristics. We may begin by describing the kinds of money.

There is at present no full-bodied money in use in the United States. The monetary unit, the dollar, is defined by law as $15\frac{5}{21}$ grains of gold, nine-tenths fine, but no gold is coined and, aside from collectors' items permitted by Treasury regulation, the holding or use of gold coin by individuals is unlawful. The gold stock of the country, which is of course full-bodied, is held by the government in the form of gold bars (bullion), and legal title to this gold stock rests with the government. Against this gold stock the government may issue gold certificates and has done so to a very large extent, \$19.5 billion out of a gold stock of \$20.8 billion being held as security behind gold certificates in April 1947.

It would be improper to consider these certificates in the light of full-bodied money, as was done in the classification at the end of Chapter 5, for the reason that they are not allowed to circulate. The great bulk of them are owned by the Federal Reserve banks and act as legal reserves against Federal Reserve notes and Reserve bank deposits, but may not be redeemed in gold bullion by these banks except with the approval of the Secretary of the Treasury. We thus have the anomalous situation in which the Reserve banks hold specified reserves against their liabilities, but are not permitted to use these reserves for redemption purposes.

Government credit money consists, as at the close of 1932, of United States notes, Treasury notes of 1890, silver dollars and certificates, subsidiary and minor coin, and also Federal Reserve bank notes and National bank notes, the two latter types of money being in process of retirement and no longer liabilities of the issuing banks.

Bank credit money consists of Federal Reserve notes and the check currency. The bulk of the hand-to-hand money in circulation consists of Federal Reserve notes which amounted

to \$23.8 billion in April 1947 as compared with \$4.2 billion of government credit money.

Legal tender and lawful money.—The Joint Resolution of June 5, 1933, made all forms of hand-to-hand money in the United States full legal tender in the payment of all debts public and private. Legal tender provisions that, as indicated at the close of the preceding chapter, formerly varied from one type of hand-to-hand money to another, have been simplified even if not improved.

As a matter of fact, existing provisions make for even greater confusion than previously existed between legal tender and what is referred to as lawful money. The term "lawful money," in the days of the national banking system prior to 1914, indicated such money as could be properly used for bank reserves, and the term has not been discarded. Formerly, the term included gold coin and certificates, silver dollars and certificates, United States notes and Treasury notes of 1890. Silver certificates were not legal tender, nor were gold certificates prior to 1919, but since they were warehouse receipts for deposited legal tender money, they were included under the head of lawful money.

After the passage of the 1917 amendments to the Federal Reserve Act, member bank legal reserves could consist only of deposits in the Federal Reserve banks. The Reserve banks, however, were required to keep a 35 per cent reserve in gold or lawful money against deposits and might redeem Federal Reserve notes over their counters in gold or lawful money. With the passage of the Joint Resolution of June 5, 1933, the various bank notes then in circulation were made full legal tender, but were not lawful money for Federal Reserve bank reserves. Lawful money consisted, and still consists, chiefly of United States notes and silver dollars and certificates. The final confusing note was struck by the amendment of June 12, 1945, which provided that the Federal Reserve banks should maintain reserves of 25 per cent of both Federal Reserve notes and deposits wholly in *gold certificates*, but did not permit redemption in such certificates. Federal Reserve notes (and deposits) are now redeemable in lawful money although such money constitutes no part of their legal reserves.

Suggested changes.—The monetary system of the United States contains a number of inconsistencies and undesirable features that should be eliminated. The changes that might be made to improve the system can be quickly noted.

Gold redemption.—Gold certificates should again be allowed to circulate in private hands. Such certificates should be made unconditionally redeemable in gold bars, and Federal Reserve banks should be directed to redeem their notes and deposits in gold certificates upon request of any noteholder or depositor.

The power of the President to alter the weight of the gold dollar has been allowed to expire, but sections 8 and 9 of the Gold Reserve Act of 1934 still permit the Secretary of the Treasury to buy and sell gold at such rates and under such conditions as he may deem to be in the public interest. These sections are inconsistent with the law fixing the dollar at $15\frac{5}{16}$ grains of gold nine-tenths fine and should be repealed.

Repeal of silver legislation.—The Silver Purchase Act of 1934, the acts of July 6, 1939, and July 31, 1946, the provisions of the Thomas Inflation amendment and the Gold Reserve Act of 1934 permitting bimetallism, reduction in the weight of silver coins, etc., should all be repealed *in toto*. Silver legislation since 1873 has been practically uniformly unjustified and undesirable and the subversive influence of the silver bloc on our monetary system should be eliminated once and for all.

Retirement of United States notes and silver dollars and certificates.—United States notes and silver dollars and certificates should be retired, their place to be taken by Federal Reserve notes and gold certificates.

Legal tender.—If the above reforms were instituted, full legal tender powers should be given to gold certificates only. Limited legal tender powers, such as existed prior to 1933, should be reinstituted for subsidiary and minor coins. The provisions of the law that make Federal Reserve notes receivable at par for certain specified payments might well be retained. The term "lawful money" should be dropped entirely.

With these alterations, the United States would have a sound and much simplified monetary system with a standard

money of gold certificates, a hand-to-hand circulation consisting of gold certificates in part, but largely of Federal Reserve notes and fractional coin, and, of course, the check currency.

Conclusion.—We have now traced briefly the evolution of the American monetary system and have made certain suggestions for its improvement. In the following chapters, the development of commercial banking from the early days of the country will be similarly traced, after which a detailed analysis of the banking process will be in order.

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CHAPTER 7

EARLY AMERICAN BANKING

Introduction.—In tracing the evolution of American banking, the close of the Revolutionary War may be taken as a starting point. Not only does this date mark the beginning, approximately, of the United States as an independent nation, but it is also to be noted that, aside from a few ill-conceived attempts at land banking in the colonies, no real banking institutions, deserving of the name, had been established prior to the termination of the Revolution. Commencing at this point, then, the treatment of American banking development may be conveniently divided into three periods, viz., first, 1781–1836; second, 1836–1863; and third, 1863–1913. The first of these periods terminates with the expiration of the charter of the Second Bank of the United States; the second is a period of purely state banking; the last period covers the development of the national banking system up to the passage of the Federal Reserve Act in 1913.

THE UNITED STATES BANKS: 1781–1836

Three early banks.—At the time of the establishment of the First Bank of the United States there were in existence three rather notable banks operating under state charters, all of which were soundly managed and successful institutions. The first, in order of time, was the Bank of North America, sponsored by Robert Morris and located in Philadelphia. It was first chartered by the Continental Congress on the last day of 1781, and commenced business on January 7, 1782. It was later rechartered by Pennsylvania, there being some doubt as to the ability of the Continental Congress to grant a bank charter. It assisted the government to some extent in financing the Revolution¹ and was an undoubted asset to the business community.

¹ Gouge thinks this assistance was much less important than is usually believed. See his *Short History of Paper Money and Banking* (New York, 1835), p. 12.

The Bank of Massachusetts, Boston, and the Bank of New York, in New York, were both founded in 1784. The former received a charter in that year from Massachusetts, but the latter operated without specific authorization until 1791, when it was given a charter by the State of New York. The articles of association under which the Bank of New York commenced its business were drawn by Alexander Hamilton, who was instrumental in founding the bank and was a member of its first board of directors.² Both of these institutions proved advantageous to the communities in which they were located.

The First Bank of the United States: 1791-1811.—The passage of the act of February 25, 1791, incorporating the subscribers to the Bank of the United States, was largely the result of the efforts of Alexander Hamilton, then Secretary of the Treasury under Washington. Hamilton, who, as already noted, had earlier been active in founding the Bank of New York, was not slow to realize the benefits that the national government might expect to receive from the establishment of such an institution. Some of the Federalists and a majority of the Republicans were opposed to the incorporation of a national bank, mainly on the ground that it would be unconstitutional, but a bill finally passed both Houses of Congress and, after mature deliberation, was signed by Washington and became law.

Provisions of the charter.—The act provided that the new bank, which was to be located in Philadelphia, should have a capital of \$10,000,000, composed of 25,000 shares with a par value of \$400 each. The government was to subscribe to \$2,000,000 of stock, in return for which the bank was to lend the government a like amount, this loan to be repaid in ten annual installments. Subscribers to stock in the bank, other than the government, were to pay one-fourth of their subscriptions in specie and three-fourths in 6 per cent government stock (bonds), payments to be made in four equal semi-annual installments. Single subscriptions were limited to a maximum of 1000 shares.

The management of the bank was vested in a board of twenty-five directors elected by the stockholders, the small

² *Finance Report* 1876, p. 133.

stockholders being favored since the proportion of votes to shares decreased with increased holdings of stock, and an absolute upper limit of thirty votes was fixed for any one shareholder. Foreign holders of stock, moreover, were not allowed to vote by proxy. Not more than three-fourths of the directors were eligible for re-election the following year, and all the directors were required to be citizens of the United States and stockholders in the bank. The board of directors was authorized to appoint a president who should receive a salary, although the members of the board were to receive no compensation. Seven directors were necessary to constitute a quorum for the transaction of business.

The bank was empowered to receive deposits, issue notes, and make discounts. Note issues were limited to \$10,000,000, the amount of the capital stock. The rate of discount charged was not to be higher than 6 per cent, and the bank was forbidden either to deal in commodities directly or to hold more real estate than was necessary to the business of the bank, other than such real estate as had been mortgaged to it by way of security on loans. No loan might be made to the Federal government in excess of \$100,000, except by special authorization from Congress, and loans to the states were limited to \$50,000 each. The bank might sell any government stock (bonds) in its possession, but it was not permitted to buy such stock. It might establish branches wherever convenient for the transaction of its business. The charter was to expire, unless renewed by Congress, on March 4, 1811.

Operations of the bank.—The bank opened its doors for regular business on December 12, 1791, and continued in operation until the expiration of its charter. It was, on the whole, highly successful. It entered into friendly relations with the city banks of Philadelphia and New York, and established contacts and some measure of control over other state banks through the opening of branch offices: branches being eventually established in Boston, New York, Baltimore, Norfolk, Charleston, Savannah, Washington, and New Orleans.

The method of regulating the note issues of the state banks is worthy of comment. At the time the Bank of the United

States was chartered, there was in existence, aside from the three banks previously mentioned, but one state bank, the Bank of Maryland, chartered in 1790. Relations with the state banks were, therefore, at first of comparatively slight importance. By the close of the century, however, the number of state-chartered institutions had increased to twenty-six, an increase that continued throughout the life of the First Bank, there being eighty-eight state banks in operation in 1811.³ As the number of state institutions grew larger, payments to, and deposits in, the Bank of the United States included a goodly proportion of state bank notes. By sending these notes back to the issuing banks for redemption in specie, the United States Bank prevented the state institutions from expanding their note issues too rapidly. As the United States Bank refused the notes of state banks that would not redeem them, the latter institutions were careful to remain on a specie-paying basis.

Aside from controlling the issues of the state banks, the Bank of the United States was of great assistance to the commercial community and to the government. It discounted notes and bills for private customers, assisted importers in the payment of customs duties, and issued its own notes, which gained an extensive circulation since they were legal tender in payments to the government. The Bank served the government as fiscal agent, collecting and transferring funds for it, and also made a number of loans to the Treasury. The government had some difficulty in paying back its original loan of \$2,000,000 to the Bank, and was finally forced to dispose of its holdings of bank stock to accomplish this. The last of the government holdings of bank stock was sold in 1802 at a large premium, and, from the date on, the Bank was privately owned as well as privately operated.

In view of the very evident advantages of a well-managed national bank, it seems hardly credible that Congress should have refused to renew the charter of the Bank of the United States in 1811. Nevertheless, there was still a good deal of opposition to its renewal on constitutional and other grounds, with the result that the charter was not extended and the Bank was forced to wind up its affairs. Upon liquidation the

³ *Ibid.*, pp. 153-54.

stockholders finally received \$434 for each \$400 share held,⁴ although the time taken to complete the settlement was so extended that the loss of interest more than offset the premium received.⁵

State banking: 1811-1816.—With the dissolution of the First Bank of the United States, the organization of many new state institutions occurred, the latter increasing in number from 88 in 1811 to 246 in 1816. The government deposits, about two-thirds of which had been kept with the Bank of the United States during its active operation, were distributed among the state banks in this period, and the desire to obtain some of these deposits, as well as to engage in business unhampered by the restraining influence of a national bank, doubtless explains the great increase in the number of state institutions in the five years under consideration.

The state banks were not, on the whole, satisfactory depositories for the national government's funds. They issued a plethora of notes, many of which were depreciated, and in 1814 practically all of the banks except those in New England suspended specie payments. Meanwhile, the government was trying to finance the War of 1812 by means of bank loans, a process that enhanced the difficulties of a system of diverse state banks subject to little or no restraint. Payments to the government were made in depreciated bank notes, government funds were on deposit in non-specie-paying banks, and the credit of the government was none too good. Altogether, the situation was critical.

The Second Bank of the United States: 1816-1836.—In such circumstances it is not surprising to find that there soon developed an agitation for a revival of the Bank of the United States. In fact, a petition of 150 New York citizens to establish a national bank was referred to the House Ways and Means Committee in January 1814.⁶ Nothing came of this petition or of five subsequent attempts to charter a new United States Bank. Secretary of the Treasury Dallas submitted various plans, as did some others, but they were voted down because of objections to particular features.

⁴ White, *Money and Banking*, p. 264.

⁵ Gouge, *op. cit.*, p. 15 note.

⁶ Catterall, *The Second Bank of the United States*, p. 7.

The wretched condition of the state banks, however, coupled with the difficulties of the national treasury, had weakened the opposition to a national bank as such, and finally, after six unsuccessful attempts, a bill chartering a second Bank of the United States was passed by both Houses and signed by the President on April 10, 1816.

Provisions of the charter.—The charter provisions of the Second Bank strongly resembled those of the First Bank of the United States in broad outlines, although differing at some points with regard to details. The capital of the new bank was to be \$35,000,000, of which the government was to subscribe to one-fifth, or \$7,000,000, the other four-fifths to be offered for private subscription. Payment was to be made, one-fourth in specie and three-fourths in government stock (bonds) as far as private subscriptions were concerned, while the government was to pay for its subscribed shares entirely with its own stock (bonds). The par value of the stock of the Bank was fixed at \$100 per share, and individual private subscriptions were limited to 3000 shares. Subscriptions were to be paid in three installments, at specified intervals covering eighteen months, in the proportion of \$5 specie to \$25 government stock on the first installment and \$10 specie to \$25 government stock on the other two. The Bank was to pay the government a bonus of \$1,500,000.

A change was made in the management feature of the new Bank by a provision specifying the appointment of five of the twenty-five directors by the President of the United States. The remaining twenty were to be elected by the stockholders, who were to have voting rights in the same proportion to holdings of stock as had been accorded to shareholders in the first Bank. Provisions regarding the voting of foreign shareholders, the qualifications of directors and their eligibility for re-election, the appointment and tenure of the president of the Bank, etc., were also substantially the same as those of the First Bank's charter. The management of the branches, however, was specified in more detail than in the case of the First Bank's charter.

With the exception of a few minor details, the limitations on the nature of the Bank's business were identical with

those governing the operations of the earlier bank. Note issues were allowed up to \$35,000,000, instead of \$10,000,000, but this merely corresponded to the increased capital of the Second Bank. There were also one or two other unimportant changes that require no special comment. The charter was granted for a period of twenty years.⁷

Operations of the Second Bank.—The Second Bank of the United States began business on December 31, 1816. Unfortunately, it was not properly managed during the first few years of its existence, a fact that largely destroyed its usefulness for a considerable time. William Jones, the first president, was not a competent banker, nor was he sufficiently strict in his control over the branches. Three directors of the Baltimore branch headed a clique of speculators that nearly brought the Bank to ruin. "This little band of gamblers attempted, with only too much success, to direct the bank's business so as to manipulate the price of the stock in the open market."⁸ They made loans to themselves of bank funds for the purpose of buying up stock and engaged in other practices of an unsound and fraudulent nature. Things were in a precarious state when, in January 1819, Jones was forced to retire. In March of the same year Langdon Cheves assumed the presidency of the institution.

Cheves was not a banker, but he possessed an honesty and determination that were much needed in the administration of the Bank at this time. His business was to restore the Bank to a sound condition, and he proceeded to accomplish this task. Some effort had been made to contract the Bank's note issues near the close of Jones's administration, and Cheves continued and extended this policy. The lending operations of the Western branches had resulted in a drain of the bank's capital from Philadelphia and the East to the West, a situation that Cheves sought to correct by greatly restricting, and in some cases even forbidding, the issuance of notes by the branches. "Indeed," as Catterall points out, "during Cheves's entire administration the issues were so carefully restricted that it was hardly possible to speak of a cir-

⁷ See a convenient comparison of charter provisions of the First and Second Banks in Dewey, *The Second Bank of the United States*, pp. 164-75.

⁸ Catterall, *op. cit.*, p. 40.

ulation of the Bank of the United States in many parts of the country, notably in the West.”⁹

While Cheves's policy succeeded in bringing the capital of the Bank back to the East and in putting the institution into a sound condition, it did not greatly contribute to the latter's usefulness or profitableness. Accordingly, Cheves, after accomplishing what he had set out to do, retired in January 1823, at which time Nicholas Biddle became the president of the Bank. It was during Biddle's administration that the Bank attained its greatest success. The contraction policy of Cheves was dropped and the Bank began to assume a place of importance throughout the country. Twenty-six branches were eventually established,¹⁰ a number of these being organized during Biddle's administration. Biddle's success was largely due to the close scrutiny he maintained over the business of the branches in various parts of the country. Although some of their loans and practices were not always of the best, they were, on the whole, soundly operated. Some measure of control was also exerted over the issues of the state banks through the process of sending the latter's notes home to them for redemption where this could be conveniently done. Transfers of funds for the government and for others were made efficiently, and the exchange charged on transfers for individuals was moderate for those days. All in all, the Bank must be considered as having been efficiently and successfully operated from 1823 up to the summer of 1833.

In August 1833, the Bank began to contract its business, and continued that policy until the summer of 1834. The supposed reason for the contraction was the probable removal from the Bank of the government deposits. Biddle had antagonized Andrew Jackson, who did not like banks anyway, to a degree where a renewal of the charter seemed out of the question, and it was known to the administration of the Bank that Jackson wished to have the government deposits withdrawn even before the expiration of the charter. The contraction would, therefore, place the Bank in a position to pay these deposits, as well as to prepare to wind up affairs.

⁹ *Ibid.*, p. 405.

¹⁰ Although not more than twenty-five existed at any one time. *Ibid.*, p. 398.

Unquestionably, some curtailment of business was justified in the circumstances, but it was carried so far as unduly to injure business. It must be concluded that Biddle was retaliating against Jackson by way of oppressing business, which was an unjust and unsportsmanlike procedure, although one that was quite natural in view of Jackson's stubborn and unreasoning opposition.

The policy of contraction ceased entirely in September 1834, but the remaining days of the Bank were devoted to getting its affairs in shape for liquidation. The deposits of the government were removed gradually, beginning in the fall of 1833, and, by 1835, the Bank had sold the assets of nine branches. The assets of nine more branches had been disposed of by April 3, 1836, and three other offices had been closed in the meantime. The charter expired on March 3, 1836, but the Bank did not close, as it had obtained a charter from Pennsylvania. It continued to do business under state law but was not successful and finally failed miserably.

It should be clear from the foregoing account that the Second Bank of the United States served the country in satisfactory fashion for but little more than half of its chartered existence. There is no reason for believing, however, that the bank would not have continued a valuable national asset after 1833 if the political entanglements of its last years could have been avoided and a renewal of its charter secured. The unsatisfactory banking conditions that followed 1836 are to be laid, in part at least, at the door of Andrew Jackson and his supporters in Congress.

THE PERIOD OF STATE BANKING: 1836-1863

Lack of uniformity.—Banking conditions in the United States during the period from 1836 to the establishment of the national banking system were, on the whole, less satisfactory than at any other stage of the banking development of the country. After the Bank of the United States ceased its measures for contraction in 1834, a period of rapid state bank expansion set in, the number of state banks increasing from 506 in 1834 to 704 in 1835, an increase that continued until 1840 when there were 901 such institutions. The period following 1834 was one of speculative excesses

accompanied by a rapid growth of banking facilities. As the Bank of the United States withdrew its controlling influence over the state banks, the note issues of the latter expanded rapidly from \$94,839,570 in 1834, to \$149,185,890 in 1837. The speculative mania terminated with a crisis in the latter year. A general suspension of specie payments took place, and many banks failed, although the total number increased as a result of the establishment of new banks. Circulation, which had fallen to \$116,138,910 in 1838, increased again, in 1839, to \$135,170,995. The recovery was not lasting, however, and the years 1840-1843 were even more disastrous to the banks than 1837 had been. The extent of the disaster is shown by the decrease in the number of banks from 901 in 1840 to 691 in 1843, which was accompanied by a decline in circulation from \$106,968,572 to \$58,563,608 in the same period.¹¹ It was not until 1845 that the banking system began to recover from the events of these years. It is unfortunate that the power and influence of the Second United States Bank should have been removed at a time when they could have been of the greatest service to the country.

It is true, of course, that the crisis period 1837-1842 affected the entire country and its banking institutions. Nevertheless, there was a great diversity in the strength of the banks in different sections of the country, and of different banks in the same section, and this diversity existed during the entire period with which we are here concerned. It is, perhaps, the lack of uniformity of banking conditions that is the outstanding characteristic of the period. This condition was a result, in part, of the variation in state laws and state supervision in different parts of the country, and, in part, of the economic differences of the various regions. To some extent, a similar diversity of banking conditions is found today, because of the existence of 48 systems of state banks in addition to the national banking system. The disparity of banking practice in the years 1836-1863, however, was not only absolutely greater than it is at present, but was of more significance relatively, since notes were of more importance

¹¹ The data here cited are to be found in a table of state bank statistics compiled by J. J. Knox, and appearing in the *Finance Report*, 1876, pp. 204-5.

than deposits outside the large cities, so that much of the hand-to-hand circulation of the country was furnished by the banks in the form of bank notes. Such being the case, the emphasis is properly placed on "circulation" in the discussions of banking development during this period.

Widespread abuses and defects.—In presenting a sketch of the period under review, we shall first consider some of the rather general defects in banking law, supervision, and practice, after which attention will be directed to some of the more satisfactory developments.

The paying in of capital.—The methods used to pay subscriptions to capital stock were unsound and unsatisfactory in many instances. Bank charters or banking laws usually required the payment of but a fraction of the required capital before the bank was permitted to begin business, the remainder to be paid in installments, the time and amount of which were left at times to the determination of the directors, although occasionally they were stated in the law. This led to the practice of paying in capital by borrowing at the bank. Stock subscribers would borrow at the bank on their personal notes, the proceeds of these loans being used to pay the stock subscription. A considerable share of the bank's capital then consisted of promissory notes of stockholders instead of cash actually paid in to the bank. Further, these stockholders' notes were frequently renewed as they came due, so that the situation depicted tended to be permanent. Obviously, in such circumstances the capital of the bank furnished little protection to noteholders and depositors.

Unsatisfactory limitation of note issues.—Although the amount of notes that a bank could issue was generally limited, the limit ordinarily specified was some proportion of the bank's capital. This was not a satisfactory method as it tended to divorce the bank's note issues from the amount of cash held for redemption purposes. Even assuming the entire capital to have been paid in cash, there is no reason for thinking it would be retained as a fund of specie, while in the circumstances depicted in the preceding paragraph, it is clear that a bank's nominal capital often did not represent even an initial specie payment of any significance. The result

was that the method of limitation mentioned frequently failed to prevent excessive note issues.

Lack of redemption facilities.—In addition to the inadequate regulations for limiting note issues, there was, in the usual case, no requirement for the redemption of notes except over the counter of the issuing bank.¹² Thus, in sections of the country at all distant from the issuing bank, the latter's notes would circulate only at a discount, and since they could usually be passed from hand to hand at a less discount than that at which they would be accepted by the local banks, they tended to stay in circulation rather than to be sent home for redemption. As a result, not only did the hand-to-hand currency of any section tend to be composed of a variety of notes with varying discounts, but the most effective check to overissue—the prompt presentation of notes for redemption—was lacking as well.

Lack of uniformity.—As notes were issued by a heterogeneity of state banks, they were not uniform in design and were easily counterfeited. Counterfeiting became an art in this country toward the close of the period under consideration, and "Counterfeit Detectors" were regularly published in all the leading cities of the country.¹³ The difficulties caused by counterfeits were enhanced by the circulation of notes of "retired" or failed banks, which were of appreciable amount and were included in the lists published in the "Detectors."¹⁴

Unsound loans.—A further defect of the period arose from the unsound lending policies of many of the banks. The object of numerous banks was to get their notes into circulation with a view to making a profit. To accomplish this, loans were granted for long periods without regard to the use to which the borrowed funds were put. Loans to individuals without security and indefinitely renewable, and loans on real estate security for long periods, resulted in the issuance of large amounts of notes which, with the lack of redemption facilities, stayed in circulation for indefinite periods without respect to the needs of business.

¹² The outstanding exception to this was the Suffolk system in New England, which is discussed later in the chapter.

¹³ Davis, A. McF., *The Origin of the National Banking System*, p. 24.

¹⁴ *Ibid.*, p. 25.

Inadequate supervision.—In some instances the foregoing evils were the result of the absence of sound regulatory provisions in the charters or laws under which the banks were operated. As time went on, however, a majority of the state legislatures attempted to remedy matters by placing various limitations on the business the banks could transact, by requiring security for note issues, and in other ways. That such regulation was often ineffective is to be attributed in part to inadequate supervision. Although some proportion of the banking legislation was ill-advised, many of the laws were sound and well-directed, but, however satisfactory a given law might be, there was little prospect of securing the desired result from it in the absence of proper provision for its enforcement. In a relatively new and rapidly developing country, where the demand for loans was great and where bankers of experience and judgment were scarce, there was an unusual need for active and intelligent supervision of bank activities. As a matter of fact, such supervision was, for the most part, either entirely lacking or quite incompetent to meet the necessities of the situation.

Outstanding developments.—In spite of this rather drab picture of American banking, the period 1836–1863 was not without noteworthy developments. Certain systems of note issue and redemption, certain banking laws, and certain individual banks stood out in distinct advance of their time. A discussion of the period would not be complete without at least a brief reference to some of the more notable accomplishments in the field of banking.

The Suffolk system in New England.—From the early days of the First Bank of the United States, the bank note currency of New England was superior, on the whole, to that of most of the other sections of the country. The banks of New England had been the only ones not to suspend specie payments in 1814, and, while failures occurred, the majority of the banks in this region were soundly operated. The early bank note situation in Boston was not satisfactory, however, and this led to the establishment of the Suffolk system. The difficulty lay in the inability of the Boston banks to keep their notes in circulation alongside of those of the banks located in the country districts. Boston banks would

accept the notes of out-of-town banks only at a discount commensurate—sometimes more than commensurate—with the cost of sending them home for redemption, while the notes they had issued themselves had to be redeemed at par over their counters. Hence, people wanting specie or having payments to make at the Boston banks singled out the notes of the latter for these purposes, the notes of the solvent country banks passing in ordinary trade at par.

The New England Bank early turned its attention to a reduction of the discount on country bank paper by charging no more than the actual cost of redemption, and, after the establishment of the Suffolk Bank in 1818, the competition of the latter institution kept this discount at the lowest possible figure. Nevertheless, as long as any discount on country bank notes existed, the Boston banks were at a disadvantage, and in 1824 the Suffolk Bank proposed the plan of country note redemption that made New England bank notes the best in the country, generally speaking, until the establishment of the national banking system.

Briefly, the plan provided that any bank keeping a permanent deposit with the Suffolk of \$2000 or upwards (depending upon the size of the depositing bank) would have its notes received by the Suffolk at par and without other cost, provided that a sufficient added deposit were maintained to meet the charges of the notes so received. At stated intervals the notes of any bank so redeemed by the Suffolk would be sent home for payment, the Suffolk to receive in payment at par the notes of any solvent New England bank. Country banks that would not enter the plan were to have their notes sent home to them for redemption in specie.

The plan, in operation, allowed the Boston banks to keep their share of notes in circulation. But it did more than this. By acting as a clearing house for New England bank notes, the Suffolk prevented the undue expansion of country bank issues and gave New England a currency of uniform value that was readily accepted at par not only in New England, but in many other regions as well. The business of the Suffolk was profitable and, in 1855, a competing institution, the Bank of Mutual Redemption, was established. It operated on the same plan as the Suffolk and maintained adequate redemption

facilities in New England up to the time of the Civil War.¹⁵

The Safety-Fund System and the Free Banking Law in New York.—In an effort to protect bank creditors the New York State Legislature in 1829 passed a law, along the lines suggested by Mr. Joshua Forman, providing for the incorporation of safety fund banks in that state. Each bank established under this law was to pay to the State Treasurer each year an amount equal to $\frac{1}{2}$ of 1 per cent of its capital stock until payments amounted to 3 per cent of said capital. These payments were to constitute a fund to be invested in securities, and to be used in the event of failure of any safety-fund bank to pay such debts of the bank, exclusive of capital stock, as remained unpaid after the liquidation and distribution of the bank's assets. Upon depletion of the fund, the remaining banks were to be called on for additional contributions, up to $\frac{1}{2}$ of 1 per cent of their capital each year, until the fund should be restored to its original proportions.

New York's experience with the "Safety-Fund" law was not particularly happy. Three banks failed in 1837, and their creditors were taken care of without difficulty.¹⁶ In the three years 1840–1842, however, eleven more banks failed and the strain on the fund was too great. Through the issuance of state bonds the noteholders were paid, but the fund was depleted to such an extent that later payments of the safety-fund banks had to be pledged to pay off the bonds that had been issued earlier.

The safety-fund idea was sound in principle, but the New York law had two serious defects. First, it applied to all creditors of the banks instead of to noteholders only; and, second, it based the contributions to the fund on capital stock instead of notes in circulation. The first of these defects was remedied by law in 1845, but by that time it was too late to be of much use, as newly organized banks were being established under the free banking law of 1838.

The law of 1838 was not a protest against the safety-fund

¹⁵ For a more detailed account of this system, see Root, C., *Sound Currency*, Vol. II, No. 13, pp. 276-83.

¹⁶ A supplementary law of May 8, 1837, authorized the Comptroller to make immediate payments to noteholders of failed banks. This was done in the three banks mentioned.

system, for it was passed before the eleven destructive failures of 1840-1842 occurred. Rather it was a result of the growing democratic objection to the establishment of banks by special charter. It was felt that banking, under the latter method of establishment, was made monopolistic, while the large amount of political log-rolling and bribery attendant upon the securing of bank charters was objected to. The law accordingly provided that any persons or associations of persons might organize banks by complying with the regulations set forth. The issuance of bank notes was placed in charge of an officer known as *the Comptroller of the Currency* who might issue such notes to banks upon the receipt of bonds of the United States, New York State, or other approved states or of mortgages on improved New York farm land to the amount of the notes received. Notes under \$1000 denomination were made payable on demand and various penalties were imposed for failure to pay such notes. The original law also required a reserve of 12½ per cent against note issues, but this provision was later repealed.

The banking law of 1838 was not especially successful in its effect on note issues. A large number of banks that had organized under the law failed, and it was soon found that the liquidation of the security was ordinarily insufficient to pay the noteholders in full. This led to a tightening up of the security requirements for bank notes, but the system never became extremely successful. The safety-fund plan, properly conceived, would have been far more desirable. The law did eliminate the objectionable method of establishing banks under special charter, however, and, from the point of view of banking development in the United States, both the note issue provisions and the free banking feature of the law are significant, since both features were later incorporated in the national banking law and were hence destined to play an important part in the later evolution of our banking system.

The Louisiana banking law of 1842.—After the banks of Louisiana had suffered in marked fashion from the vicissitudes of the years following 1836, the State Legislature passed a banking act in 1842 that formed the most scientific piece of banking legislation of the pre-Civil War period.

Its chief provisions have been well summarized by Mr. Horace White as follows:¹⁷

The principal features of this law were the requirements (1) of a specie reserve equal to one-third of all its liabilities to the public; (2) the other two-thirds of its liabilities to be represented by commercial paper having not more than ninety days to run; (3) all commercial paper to be paid at maturity; and if not paid, or if an extension were asked for, the account of the party to be closed and his name to be sent to the other bank(s) as a delinquent; (4) all banks to be examined by a board of State officers quarterly or oftener; (5) bank directors to be individually liable for all loans or investments made in violation of the law, unless they could show that they had voted against the same if present; (6) no bank to have less than fifty shareholders having at least thirty shares each; (7) any director going out of the State for more than thirty days, or absenting himself from five successive meetings of the board, to be deemed to have resigned, and his vacancy to be filled at once; (8) no bank to pay out any notes but its own; (9) all banks to pay their balance to each other (in) specie every Saturday, under penalty of being immediately put in liquidation; (10) no bank to purchase its own shares or lend on its own shares more than thirty per cent of the market value thereof.

This act was strictly enforced and gave Louisiana sounder banking conditions than prevailed in many other parts of the country at that time.

The State Banks of Indiana and Ohio.—The State Bank of Indiana was incorporated in 1834, with an original capital of \$1,600,000, of which one-half was to be subscribed by the state and one-half by private parties. The charter called for a bank with branches, but the parent bank was merely a board of control, consisting of a president and four directors appointed by the legislature and one director chosen by each branch. The branches were independently organized and operated institutions, each with a capital of \$160,000, but were subject to the supervision of the central board. There were ten branches originally, the number being increased from time to time after 1834. The branches were empowered to carry on a commercial banking business, and to issue notes not to exceed double the amount of their capital. The branches were independent in carrying on their business, but each branch was liable for the debts of every other branch.

The State Bank of Indiana was highly successful, being

¹⁷ *Sound Currency*, Vol. II, No. 1, pp. 209-10.

soundly operated during the period of its charter. It was rechartered in 1855 as the Bank of the State of Indiana, and was one of the few banks not to suspend specie payments in 1857. The state did not participate in the ownership of the rechartered bank.

The State Bank of Ohio was established under a banking law passed in 1845 and was organized along lines similar to the State Bank of Indiana. The state, however, did not subscribe to the stock of the Ohio bank. The parent bank (so-called) consisted of a mere board of control appointed by the branches. The branches were independently managed, and were jointly liable for one another's notes, but not for other debts as in the case of the State Bank of Indiana. Note issues were limited to specified proportions of the branches' capital, and each branch had to contribute an amount equal to 10 per cent of its issues, to be invested in a safety fund against its notes. If any branch became insolvent through failure to redeem its notes, its liabilities in the form of notes were to be redeemed from a fund of cash contributed by the other branches, these branches in turn to be reimbursed by the sale of securities from the safety fund. The State Bank of Ohio operated successfully until the establishment of the national banking system. Its charter expired in 1865, with the result that a considerable number of branches were converted into national banks on, or just prior to, that date.

The two state banks just described are interesting both as examples of sound banking at a time when much unsound banking was being practiced, and because of the similarity of their organization to that of the Federal Reserve System at a much later date.

The banks and the government.—Directly after the removal of its deposits from the Second Bank of the United States, the government was forced to keep its funds on deposit with selected state banks. This did not prove wholly satisfactory, however, and in 1840 a law was passed providing for the payment of duties and taxes to the national government in specie, and for the establishment of an independent treasury as a depository for government funds. This law was repealed in 1841, but another similar act was passed in 1846. From the latter date until the close of the

period under consideration the government held its funds in its own treasury and sub-treasuries instead of keeping them on deposit with the banks of the country.

Conclusion.—In an attempt to present a concise picture of early American banking developments, many interesting details have necessarily been omitted. That conditions were not generally satisfactory, however, in spite of some notable exceptions, cannot well be doubted. Reform of some sort was bound to put in an appearance, which it did presently in the form of the national banking system. The developments following the establishment of the latter system will be treated in the next chapter.

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CHAPTER 8

THE NATIONAL BANKING SYSTEM

The origin of the system.—The national banking system originated as a result of the financial exigencies of the government during the Civil War. Although the chaotic state of banking affairs under the various state systems made reform of some sort well-nigh imperative, it seems probable that measures for improvement of the existing situation, to be successful, would have had to originate with the states rather than with the Federal government, had it not been for the unusual conditions that surrounded the prosecution of the war. As it was, Secretary of the Treasury Chase was enabled to obtain the passage of a national banking law on the score of wartime necessity.

The plan advocated by Chase, which finally became the National Bank Act, provided for a uniform bank note currency to be secured by the deposit of government bonds by the banks organized under it, and there has been considerable difference of opinion on whether the prime motivation behind the passage of the act was to obtain a uniform currency or to provide a market for government securities. Chase himself evidently considered the prospective improvement of the currency as of signal importance, although he was not blind to the advantages to be derived from the purchase of bonds by the banks. Opinions of Congressmen who voted for the measure were divided, some favoring it from the currency viewpoint and some from the standpoint of the market for "governments."¹ In any event, the question is one of academic interest only. More to the point is the fact that in practice the matter of a uniform currency exceeded in importance the stimulation that the system gave to the market for bonds of the United States, although the latter was of more than negligible importance.

¹ See Davis, A. McF., *The Origin of the National Banking System*, pp. 103 ff.

The act of February 25, 1863, and its repeal.—What is now known as the National Bank Act originally became law on February 25, 1863, under the title of "An Act to provide a National Currency, secured by a pledge of United States stocks [bonds], and to provide for the circulation and redemption thereof." This act followed somewhat the New York State law of 1838 in providing for a free banking system with bond-secured bank note issues. A bureau of the Treasury was created, to be in charge of an appointed administrative officer known as the Comptroller of the Currency. The Comptroller was to supply the banks with notes, have custody of the plates and dies used in printing the notes, examine and require reports from the banks, and make an annual report to Congress. Provision was also made for the transfer of state banks to the national system, and for the issuance of notes by state banks under somewhat less satisfactory conditions than those controlling note issues by national associations.

This act was ambiguous in some respects and unsatisfactory in others, so that few banks were organized under it. As late as October 5, 1863, only 66 national banks were in operation, while the number of state banks was still over 1400. As a result, the act was repealed in its entirety, and a new measure, which removed many of the defects of the previous act, was approved and became law on June 3, 1864.

Provisions of the act of June 3, 1864.—The revised National Bank Act² provided, as the earlier law had done, for a system of free banking under the general supervision of the Comptroller of the Currency. Any five or more natural persons were allowed to organize a national banking association by complying with certain formalities of a routine nature and by fulfilling the capital requirements that were specified in the law.

Capital.—Every national bank in cities of more than 50,000 inhabitants was required to have a subscribed capital of \$200,000. In cities of less than 50,000 inhabitants, the minimum capital required was \$100,000, except in places

² The act of June 3, 1864, retained the title of its predecessor, the name National Bank Act being substituted therefor by the act of June 20, 1874. For purposes of convenience, however, it will be referred to in the text by the later and shorter title.

with a population of less than 6,000, where banks were permitted to be established with the approval of the Secretary of the Treasury with a subscribed capital of \$50,000. One-half of the subscribed capital had to be paid in before beginning business, the remainder to be paid in monthly (or more frequent) installments of 10 per cent of the whole amount. The stockholders were made doubly liable for the debts of the bank in case of the insolvency of the latter. After a bank was in operation, it was permitted to declare a semi-annual dividend of as much of its net profits as was deemed expedient by the management, but, before so doing, it was compelled to carry one-tenth of its net profits of the preceding six months to its surplus account, until that account should amount to 20 per cent of its capital stock.

Note issues.—Every national banking association was required, as soon as organized, to deposit with the Secretary of the Treasury bonds of the United States in an amount equal to not less than one-third of its capital stock, nor less than \$30,000 in any event. Upon the security of these deposited bonds a bank could, if it so wished, obtain circulating notes from the Comptroller of the Currency up to 90 per cent of the par value of the bonds. Notes in excess of this amount might be obtained by depositing additional bonds in the same proportion, but no bank was allowed to issue notes in an amount greater than its paid-in capital. The notes, which were to be issued in denominations of from \$1 to \$1000,³ were to be redeemable in lawful money at the issuing bank and at certain redemption agencies and were to be receivable at all national banks at par. They were also made a legal means of payment to the government for all dues except customs, and by the government for all payments except interest on the public debt.

The aggregate of national bank notes was limited by the act to \$300,000,000, one-half of which was to be apportioned among the banks on the basis of the population of the

³ Not more than one-sixth of the notes issued by any national bank were to be in denominations of less than five dollars, while after the resumption of specie payments no notes of less than five-dollar denomination were to be issued. A war measure of October 5, 1917, again permitted the issuance of national bank notes in denominations of less than five dollars, but apparently no notes were ever issued under this authorization.

various states and territories, the other half to be apportioned by the Secretary of the Treasury with due regard to existing banking capital and business needs.

Reserves.—The banks in seventeen designated cities, including New York, were required to maintain reserves of not less than 25 per cent of both their note and deposit liabilities. The banks of the sixteen cities other than New York, however, were allowed to keep one-half of their required reserves in the form of cash deposits with approved banks in New York city, the other half to be kept in lawful money in their own vaults. The banks of New York city, on the other hand, were required to maintain their entire legal reserves in the form of lawful money. All banks located outside of the seventeen designated cities were required to keep reserves equal to 15 per cent of their notes and deposits. Three-fifths of this amount might be in the form of deposits with approved banks in any of the seventeen cities previously mentioned, the other two-fifths to be held in lawful money in the banks' own vaults.

If the reserve of any national banking association should fall below the minimum percentage specified in the law, that bank was not to be permitted to make any more loans, discounts, or investments until the required percentage had been restored. Banks in any of the seventeen reserve cities were required to redeem the notes of banks for which they held deposited reserves, failure to do so subjecting them to insolvency proceedings by the Comptroller of the Currency in the same manner as though they had failed to redeem their own notes.

Nature of business.—Banks organized under the National Bank Act were permitted to carry on a general commercial banking business. They might accept deposits and make loans and discounts, but were not permitted to lend on the security of real estate, nor to purchase, hold, or convey real estate except such as was necessary to the transaction of their business or as had been received by way of security for debts previously contracted. Loans on the security of the bank's own stock were prohibited. No bank was permitted to lend an amount greater than 10 per cent of its capital stock to a single borrower, an exception being made of the discount of

bills of exchange drawn against actually existing values, and the discount of commercial or business paper actually owned by the person negotiating it.⁴

Relations with the government.—The Secretary of the Treasury was permitted to designate certain national banks as depositories for all government revenues except customs, such deposits to be secured by government bonds or in other satisfactory fashion. These depository banks were also to act as financial agents for the government when and as required.

In lieu of all other taxes by the Federal government, the banks were required to pay a tax of $\frac{1}{2}$ of 1 per cent semi-annually upon their average circulation, and a semi-annual tax of $\frac{1}{4}$ of 1 per cent upon average deposits and upon average capital not invested in United States bonds.⁵

The government guaranteed the note issues of the national banks. In case of default by a bank, the Comptroller of the Currency was authorized to declare the deposited bonds of the defaulting association forfeited to the Treasury. The Treasury would then pay all the notes of the failed bank in full, either canceling a like amount of bonds, or selling the bonds at auction to recover the money paid out to noteholders. The government also retained a first lien on all the remaining assets of the failed bank in the event that the proceeds from the sale of bonds should prove insufficient to reimburse the Treasury for the notes redeemed.

Charters were granted by the government for a period of twenty years from the date of incorporation, and provision was made for the conversion of state banks into national banking associations.

Development of the system.—The revised act of 1864 was more satisfactory than its predecessor, and the number of national banks increased to 508 by October 1864. Nevertheless, the progress of the new system was not so rapid as was desired, chiefly because the state banks could still issue notes under less onerous conditions, in many instances, than those imposed on the national banks. This difficulty was

⁴ This restriction on loans to one borrower remained in force until 1906, when it was broadened to 10 per cent of the lending bank's capital and surplus.

⁵ The tax on deposits and capital was repealed by the act of March 3, 1883.

remedied by the passage of a revenue measure on March 3, 1865, which contained a provision taxing the circulation of state banks at the rate of 10 per cent per annum after July 1, 1866. An amendment to the National Bank Act of the same date permitted state banks with branches to come into the national system and retain and keep in operation their branches, a provision designed to induce the conversion of state banks with branches to national banking associations, since the act did not provide for branch banking by the institutions organized under it. The combined effect of these acts was to draw many of the state banks into the national system,⁶ the number of national banks increasing to 1513 on October 2, 1865, and to 1644 a year later.⁷

Subsequent amendments.—After the state bank notes had been taxed out of existence, the national banks furnished the country with a uniform bank note currency that was much more satisfactory than the miscellany of state bank issues that had preceded it. Some difficulties were encountered in the apportionment of the \$300,000,000 aggregate of national bank notes, and an Act of July 12, 1870, raised the limit to \$354,000,000, and provided for a new apportionment on the basis of the census of 1870.⁸ An inflationist measure, providing for an additional \$46,000,000 of bank notes, together with an increase in the amount of greenbacks to \$400,000,000, was passed in 1874, but was vetoed by the President.⁹

The next important piece of amendatory legislation was the Act of June 20, 1874. This act provided for a redistribution of \$55,000,000 of bank note circulation and for the voluntary retirement of circulation by the banks. More important, however, was the abolishment of all reserve requirements against notes, the banks instead being required to maintain with the Treasury a redemption fund in lawful money equal to 5 per cent of their circulation. The earlier reserve requirements against deposits were retained, but the

⁶ The conversion of state into national banks at this time is to be attributed almost entirely to the tax on state bank circulation. The author has been unable to find records of the conversion of any state banks with branches to national associations until a later date, although there may have been a few such.

⁷ *Finance Report*, 1876, pp. 271-72.

⁸ Conant, *A History of Modern Banks of Issue*, pp. 413-14.

⁹ *Ibid.*

redemption fund with the Treasury was to be permitted to count as part of the legal reserve against deposits. From this time on, national bank notes were redeemable only at the issuing bank and at the Treasury in Washington.

The aggregate limit on national bank note issues had been necessitated by the fact that such notes were redeemable in greenbacks, which were themselves irredeemable. The Act of January 14, 1875, which provided for the resumption of specie payments, repealed the regulations relating to aggregate issues and the apportionment of notes, the banks being permitted to issue notes up to the limit of their paid-in capital if they so desired.

TABLE 2

PERCENTAGES OF DEPOSITS REQUIRED TO BE HELD AS RESERVES
BY NATIONAL BANKS: 1887-1913

	<i>Group A</i> <i>Central Reserve</i> <i>City Banks</i>	<i>Group B</i> <i>Reserve City</i> <i>Banks</i>	<i>Group C</i> <i>All Other</i> <i>Banks</i>
Total required reserve..	25%	25%	15%
In own vaults.....	25%	12½%	6%
Redeposited:			
In group A banks....	....	12½%	...
In group A or group B banks.....	....	.....	9%

The Act of March 3, 1887, permitted the Comptroller of the Currency to designate cities with a population of 50,000 or more as reserve cities upon the application of three-fourths of the national banks located in such cities. New York was classed as a central reserve city, and other cities of a population of 200,000 or greater might apply to the Comptroller to enter this class. Under these provisions, St. Louis and Chicago were designated central reserve cities on March 18, and May 2, 1887, respectively, and the list of reserve cities was augmented in like fashion.¹⁰ Reserve requirements against deposits remained unchanged, but are presented in tabular form for the sake of clarity.

¹⁰ The act of March 3, 1903, reduced the population limit for reserve cities to 25,000. At the time of the passage of the Federal Reserve Act, the number of reserve cities was 49.

The Act of March 14, 1900, provided for the redemption and refunding of certain bonds of the United States on a 2 per cent basis. The new "2 per cents" were given the note issue privilege, and the tax on notes secured by such bonds was placed at $\frac{1}{4}$ of 1 per cent semi-annually, being retained at the earlier figure of $\frac{1}{2}$ of 1 per cent on circulation secured by bonds bearing a higher rate than 2 per cent. The act also stimulated national bank note issues by permitting the issuance of such notes up to the par value of the bonds used as security, provided the market value of the latter was not below par. In addition, the act included a section authorizing the establishment of national banks in places of less than 3000 inhabitants with a minimum capital of \$25,000.

Growth of national banking resources.—After July 1, 1866, when the tax on state bank circulation became effective, the national banking system enjoyed a steady growth up to the close of the period under discussion. The number of banks, which had been 1644 on October 1, 1866, increased to 7509 on October 21, 1913. The increase in national banking resources between these two dates was even more marked, total resources standing at more than \$11,000,000,000 in October 1913, as compared with about \$1,500,000,000 at the earlier date. Table 3 shows the changes that occurred in certain selected items from the reports of the national banks at intervals throughout the period.

Certain facts are observable from the data here given. The banks of the system strengthened their financial position by the retention of earnings in the business. Surplus plus undivided profits rose from about 20 per cent of capital stock in 1866 to 100 per cent in 1913. On the other hand, the stockholders' equity¹¹ less circulation fell from nearly 40 per cent of individual deposits in 1866 to about 22 per cent in 1913, so that, other things being equal, individual depositors received a greater margin of protection from the stockholders' equity in the earlier year than they did at the end of the period.

Perhaps the most significant development shown by the data is the increasing importance of deposits as compared with notes in the course of the period. In 1866 circulation

¹¹ Capital Stock, surplus, and undivided profits.

amounted to approximately one-half of individual deposits. By 1913 the proportion had fallen to about one-eighth. Although checking deposits were used rather extensively in the larger cities at the time of the establishment of the national banking system, the ability to issue circulating notes was nevertheless of prime importance in the conduct of a commercial banking business, especially in the rural districts. With the passage of time, the note issue function came to occupy a less significant place in banking affairs, while that of deposits became increasingly important.

TABLE 3

ITEMS FROM STATEMENTS OF NATIONAL BANKS: 1866-1913
(In thousands of dollars)

<i>Date *</i>	<i>No. banks</i>	<i>Capital Stock</i>	<i>Surplus</i>	<i>Undivided Profits</i>	<i>Notes</i>	<i>Individual Deposits</i>	<i>Resources</i>
1866	1,644	415,472	53,359	32,593	280,254	564,617	1,526,963
1870	1,615	430,399	94,061	38,609	291,799	501,408	1,510,713
1875	2,688	504,830	134,356	52,965	318,350	664,580	1,882,209
1880	2,090	457,554	120,519	46,140	317,350	873,538	2,105,787
1885	2,714	527,524	146,625	59,336	268,870	1,102,372	2,432,913
1890	3,540	650,447	213,564	97,007	122,928	1,564,845	3,141,487
1895	3,712	657,135	246,448	90,440	182,482	1,701,654	3,423,629
1900	3,871	630,299	261,874	127,595	283,949	2,508,249	5,048,138
1905	5,757	799,870	417,758	202,536	468,980	3,820,682	7,472,351
1910	7,173	1,002,735	648,268	225,769	674,822	5,145,658	9,826,181
1913	7,509	1,059,403	726,302	281,276	727,079	6,051,689	11,301,558

* Date of call nearest October 1st.

Source: Annual Report of the Comptroller of the Currency 1915. Table 61.

Finally, it should be noted that the growth in circulation was highly irregular. The item fell from over \$318,000,000 in 1875, to less than \$123,000,000 in 1890, thence rising steadily to \$727,000,000 in 1913. When it is remembered that the national banks were the only institutions with note issue power during this period, the peculiar movement of the circulation item points clearly to a defective system of note issue, a fact that will receive further comment later.

National banks commercial institutions.—The restrictions that were imposed by law upon the operations of the national banking associations had the effect of making them strictly commercial banking institutions. Their inability to purchase or to lend on real estate security for long periods, coupled with fairly high reserve requirements against *all*

individual deposits, made it impossible for them to pursue a savings-bank business to any great extent. Nor were they permitted to exercise fiduciary powers prior to 1914. They were, however, better suited to the transaction of a commercial banking business than the state banks, and dominated the commercial field in most sections of the country up to the close of the period under consideration.

State banking developments: 1863-1913.—For a time after the passage of the National Bank Act, state banking was practically non-existent. In 1861, there had been 1601 state banks in operation,¹² and, although some decline occurred within the next few years, it was not until the tax on state bank note issues had become effective that the heaviest mortality took place among institutions of this class. By 1868, the number of state banks had fallen to 247. This marked the low point and, from 1869 on, the number began to increase, although the increase did not attain very significant proportions until after 1880. At the latter date, in addition to the state banks, there were in operation a considerable number of unincorporated private banks, a very much smaller number of savings banks, and a sprinkling of trust companies. With the exception of the private banks, all these groups increased rapidly in size throughout the remainder of the period, the most rapid increase in state banks occurring after 1886, while the number of trust companies remained comparatively small until after the turn of the century. Table 4 shows the number of institutions in each of these various groups, together with the number of national banks, at five-year intervals, from 1879 to 1914.

From the point of view of numbers alone, it is clear that the national banks were far surpassed by the state-chartered and private institutions at the close of the period, the latter aggregating 19,240 in 1914, as compared with 7,493 national banking associations. Comparison of resources, however, discloses very different results. Total resources of all state banks (including private banks) in 1914 amounted to \$15,489,207,260, while national banking resources totaled \$11,564,497,260,¹³ or 75 per cent of the state bank total.

¹² *Finance Report*, 1876, pp. 204-5.

¹³ Data are from the Annual Reports of the Comptroller of the Currency.

TABLE 4
NUMBER OF BANKS, BY CLASSES

	1879	1884	1889	1894	1899	1904	1909	1914
National banks.	2,048	2,625	3,239	3,770	3,583	5,331	6,893	7,493
State banks. . .	813	1,017	2,097	3,705	4,253	6,984	11,292	14,512
Private banks. .	2,545	3,458	4,215	3,844	4,168	5,484	4,407	1,064
Trust companies	37	44	63	228	276	924	1,079	1,564
Savings banks. .	639	636	849	1,024	987	1,157	1,703	2,100

Source of data: Savings banks in all years and all groups of banks in 1914—Annual Reports of the Comptroller of the Currency. All groups except savings banks 1879-1909: Barnett, *State Banks and Trust Companies*, p. 201.

Defects of the system.—Although the banking system of the United States, as described in the preceding pages, functioned moderately well in normal times, it was nevertheless defective in a number of respects. The major drawbacks were an inelastic system of note issue, an unsatisfactory mechanism for the collection of out-of-town checks, a rigid and decentralized reserve organization, poor working relations with the Treasury, and a lack of centralized control.

Since it was these defects that finally led to the passage of the Federal Reserve Act, they will be considered in some detail in the remaining sections of the chapter.

NATIONAL BANK NOTES

Parity.—At this point it is necessary to anticipate briefly certain material that is discussed more fully in a later chapter (Chapter 11). It is there argued that a satisfactory system of bank note issue must meet three requirements: parity with the standard money, adequate security to protect the holder, and a proper degree of elasticity in order to keep the volume of note issues adjusted to the needs of business. We may now consider national bank notes from the standpoint of each of these requirements. No objection can be advanced against national bank notes so far as their parity with standard money was concerned. They were redeemable in lawful money at the issuing bank and at the Treasury in Washington. Since the issuing banks were numerous and were spread over a wide territory, the provisions mentioned might not always have been sufficient to keep the notes at par

in all parts of the country, but they were also valid tender in the payment of taxes and all public dues except duties on imports, and they had to be received at par by any national banking association. These valid tender powers, together with the provisions for redemption, proved adequate to keep national bank notes equal in value to standard money. Consequently, the notes met the requirement of parity, per se, in satisfactory fashion.

Security.—National bank notes were obligations of the United States government and as such fell into the class of guaranteed issues. This guarantee constituted the security to individual holders of such notes and could scarcely be improved upon from their standpoint. The security to the government consisted of the bonds that had been deposited against circulation with the Treasury Department. In case of default by a national bank, the deposited bonds were forfeited to the government and might be retired or sold in the market at auction to reimburse the Treasury for the expense incurred in redeeming the notes of the failed bank. The value of such bonds was always inflated because of the fact that they were in great demand by banks wishing to issue notes. Had any widespread failure of national banks occurred, a considerable proportion of these bonds would have been sold on the market with a consequent marked decrease in their market value. No such catastrophe took place, but, in any event, the government was further protected by a first lien upon all of the remaining assets of failed banks if it cared to exert its legal right in this connection at the expense of the banks' depositors. It thus appears that both the individual holder of national bank notes and the government were adequately protected against loss by the provisions regulating the security to be maintained against national bank note issues.

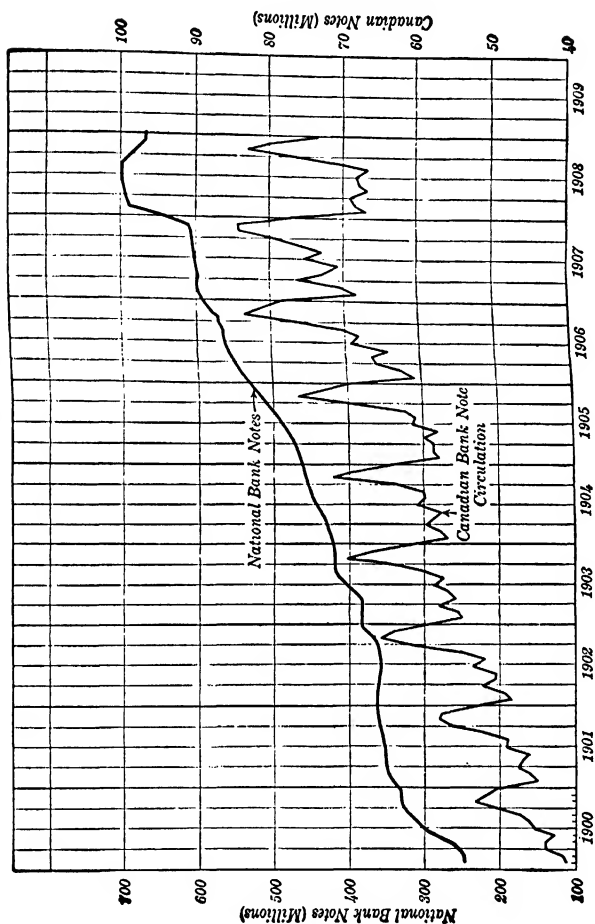
Elasticity.—As to elasticity, our judgment of national bank notes must be decidedly less favorable than in the two previous connections. In the first place, since the notes had to be secured by certain limited issues of United States bonds, it follows that the aggregate amount of national bank notes, which could not exceed the total par value of the bonds available as security, had to vary perforce with any variation

in the quantity of bonds. In any event, the amount of bonds set a rigid upper limit to the possible expansion of note issues. Secondly, as regards the issues of individual banks, factors might arise that were wholly unconnected with the needs of business for hand-to-hand money, and that would cause fluctuations in the amount of such issues. When a bank was subjected to demands for hand-to-hand money, it would meet those demands by paying out either bank notes or lawful money, depending upon which was the more profitable and the less troublesome. Frequently it has been thought that the use of national bank notes instead of lawful money for this purpose was the more profitable procedure for the bank to take because the bank then obtained the interest on the bonds that would not otherwise be obtained, but this was not necessarily the case. Presumably, the national bank notes, when issued, were to be paid out to borrowers who wanted hand-to-hand money. If no notes were issued, the bank would have to meet this demand by paying out lawful money and would receive merely the interest on the amount thus loaned. The additional profit to be made by issuing national bank notes was the difference between this figure and the interest on the investment in United States bonds, plus interest on the notes loaned, less the tax on circulation, less the expense in connection with engraving, printing, and shipping the notes, less interest on the 5 per cent redemption fund held in the Treasury.

The bonds bearing the circulation privilege bore interest at the rate of 3 or 4 per cent prior to 1900, while after that year most of the bonds available as security for national bank note issues carried a 2 per cent rate. The lower rate was largely offset, however, by the ability of national banks to issue notes up to 100 per cent of the bond security after 1900, as contrasted with 90 per cent before that year.

For purposes of illustration, consider the case of notes issued on the security of 2 per cent bonds in the period following the year 1900. The semi-annual tax on average circulation amounted to $\frac{1}{4}$ of 1 per cent. Total expenses, including sinking fund payments and loss of interest on the redemption fund, averaged at least another $\frac{1}{4}$ of 1 per cent semi-annually. If the bonds were purchased at par, the net

CHART I. NATIONAL BANK NOTES OUTSTANDING AND CANADIAN BANK NOTE
CIRCULATION, 1900-1908



SOURCE: *Banking Reform*, pp. 130-32.

profit over and above that which would have been made from the loan of lawful money was not more than 1 per cent per annum, provided that all the notes were loaned out to borrowers. If the bonds were purchased at a price above par, the profit obtainable was still smaller. For example, with Consols of 1930 selling at a trifle under 103, the net profit on notes secured by these bonds would have been between .3 and .4 of 1 per cent.¹⁴ At any higher price, the extra profit would disappear or be converted into a loss. An increase in the market price of the bonds not only made it less profitable for the banks to take out new issues, but also encouraged the retirement of certain issues already outstanding. To illustrate, if a bank had bought government bonds to secure note issues at 100, the profit to be made would have been approximately 1 per cent per annum. If, then, the bonds had risen in price to 110, the bank would have found an incentive to retire its notes and sell the security behind them at a 10-point profit. In so doing, it would, to be sure, no longer have obtained the annual 1 per cent profit from the use of the notes in place of lawful money, but the profit of 10 points at which the bonds had been sold would more than make up for the loss of the annual profit on the notes. Other price relations might be given as bearing on the profitability of national bank note issues, but the above are sufficient to show that such issues were governed by the situation in the market for government bonds with the circulation privilege to a greater extent than by the needs of business for hand-to-hand money.

Historical performance.—Historically, then, the national bank note can give no satisfactory account of itself as an elastic element in the currency. These notes showed no evidence of seasonal elasticity such as that possessed by the asset-secured bank notes of the Canadian system. A glance at Chart 1, which depicts the monthly movement of national and Canadian bank note issues from 1900-1908, gives graphic proof of the lack of seasonal elasticity in the national bank note issues. In fact, the red tape surrounding the procuring of additional notes at any time effectively prevented any rapid expansion to meet seasonal needs. Sea-

¹⁴ See the *Report of the Comptroller of the Currency*, 1926, p. 170.

sonal expansibility not being in evidence, the question of subsequent contraction did not arise. It may be noted, however, that the requirements surrounding the issuance and retirement of national bank notes provided no legal motive for the banks to send these notes home for redemption, while the large number of issuing banks, together with the limited profit to be obtained by issuing notes, prevented the profit motive from operating on any given bank to send the notes of other banks home for redemption and issue its own notes in place of those returned to the issuing banks.

As to longer time movements, the national bank note issues did not expand and contract to meet business needs, but varied with the price of government bonds and the administration of the public debt. There are two outstanding examples of the connection between bank note issues and the administration of the debt in the history of the national banking system. The first occurred in the decade following the year 1880. The Treasury, finding itself in the possession of large surplus revenues in a number of successive years, proceeded to devote them to the redemption of the public debt. By 1887, the portion of the public debt that was redeemable at par had been retired, and the following year the treasury, as authorized by law, began to buy up the remaining government bonds at the market price. This demand of the Treasury drove up the price of the bonds and presented an alluring opportunity to the national bank managements to retire their circulation and dispose of the bonds at a tremendous profit, an opportunity that they did not resist. "A few years more of wholesale redemptions, under the methods employed in 1888, and the entire debt would be extinguished. This result, except for the waste of public funds involved in the constantly advancing premium, would of itself have been no misfortune. But these very redemptions were extinguishing the bank-note currency, thus actually contracting circulation. . . . An excessive circulating medium is an undoubted evil; but a law which draws into public vaults, and keeps in idleness, seven per cent of the circulation every year is a source of possible mischief whose evil influence can scarcely be exaggerated."¹⁵

¹⁵ Noyes, *Forty Years of American Finance*, p. 126.

Thus, in the case cited, the reduction of the public debt seriously interfered with the bank note circulation of the country.

The other instance that we have referred to occurred in 1900. The act of March 14, 1900, provided for the funding and refunding of several loans of the national government upon terms less favorable than might have been obtained had not the interests of the national banks interfered. Professor Dewey, in considering the refunding provisions of this act, states:¹⁶ "Certainly the opportunity for payment of the debt was too long deferred, as was subsequently illustrated in purchases of bonds at high premiums. It is fair to conclude that the funding scheme was intended rather to relieve the difficulties of banking than to offer the best possible management of the finances over a long series of years." Referring again to the chart, the rapid increase in national bank note issues after 1900 reflects the effects of the legislation of that year rather than any real increase of demand on the part of business for bank note currency.

Judging from past performance, the national bank notes have proved far from satisfactory. After the amendment of 1874, which relieved the banks of the necessity of keeping sizeable reserves against bank note issues, the quantity of circulating notes was practically unrelated to the amount of available lawful money, being rather strongly influenced by the amount and price of outstanding United States bonds. There can be no question but that inelasticity of national bank notes was a serious defect in the operation of the banking system prior to 1914.

THE COLLECTION OF CHECKS

Local clearing houses.—The collection of checks on other banks in the same community has been carried out for many years in this country by means of local clearing houses. Since the establishment of the New York Clearing House in 1853, the banks of nearly every city of any size or importance throughout the United States have adopted a clearing organization of some sort. Under this method each

¹⁶ *The Financial History of the United States* (New York, 1922), p. 472.

member of the clearing house periodically¹⁷ sends a representative to meet with representatives of the other banks. Each representative brings with him all of the checks and other items on every other bank that his bank has received since the last clearing. The total of checks that each bank has against all of the others is then canceled against the total that all of the others have against it, differences or balances only being paid in cash or reserve funds.

While the term "clearing" refers to the *cancellation* of conflicting claims, it is obvious that each bank collects its checks on other banks in the course of the clearing process. The latter banks merely pay these checks, in whole or in part, by means of checks or claims against the former instead of by means of cash.

The only alternative to the clearing method would be for each bank to collect separately its checks on every other bank in the community. To do this would only enhance the expense and confusion of the collection process, as is well shown by the following description of the manner in which local checks were collected by the New York banks before the establishment of the Clearing House in 1853.¹⁸

In the daily course of business each bank received checks and other items on each of the other banks, which had to be presented for collection. All such items on hand were assorted and listed on separate slips at the close of the day, and items coming in through the mail on the following morning were added at that time. To make the daily exchanges each bank sent out a porter with a book of entry, or pass book, together with the items to be exchanged.

The receiving teller of the first bank visited entered the exchanges brought by the porter on the credit side of his book and the return exchanges on the debit side, who then hurried away to deliver and receive in like manner at the other banks. It often happened that five or six porters would meet at the same bank, thereby retarding one another's progress and causing much delay. Considerable time was consumed in making the circuit. Hence, the entry of the return items in the books of the several banks was delayed until afternoon, at an hour when the other work of the bank was becoming urgent.

A daily settlement of the balances was not attempted by the banks, owing to the time it would have required, but they informally agreed upon a weekly adjustment, the same to take place after the exchanges on Friday morning. At that time the cashier of each bank drew a check

¹⁷ Daily in all of the larger cities.

¹⁸ Cannon, J. G., *Clearing Houses*, pp. 148-49.

for each of the several balances due it, and sent a porter out to collect them. At the same time the porter carried coin with which to pay the balances due by his bank. After the settlement had been made, there was a meeting to adjust differences and bring order out of chaos.

The advantages of the clearing method were so apparent that bankers throughout the country soon adopted it, and by the time that the national banking system was well under way, local checks were being efficiently and easily collected through clearing houses in all of the more important cities of the country.

Other functions.—In addition to their primary function of clearing checks, many of the clearing house associations in this country perform—or have performed in the past—other useful services for their members. The most common of these special functions have been noted by Professor Spahr as follows:¹⁹ (1) extending loans to the government in time of war, (2) rendering assistance to weaker members in periods of stress, (3) fixing uniform rates of interest on deposits, (4) fixing uniform rates of exchange and of charges on collections, (5) fixing reserve requirements, (6) examining member banks, (7) gathering credit data for members, (8) publishing statements of condition and of the amount of clearings of member banks, (9) participating in annual conferences, and (10) issuing clearing house loan certificates in times of strain.

This rather wide list of services will indicate the fact that the clearing houses, at least in the larger cities, have been more than mere meeting places for the cancellation of checks. In the issuance of clearing house loan certificates, for example, the New York and some of the other more important clearing houses rendered valuable service in periods of strain prior to the establishment of the Federal Reserve System. These were interest-bearing certificates issued by members of the clearing house and used instead of cash to pay debit balances at the clearing. The acceptance of such certificates by the creditor banks in place of cash helped to conserve the reserves of the banks with unfavorable balances and assisted in tiding them over the critical period.²⁰

¹⁹ *The Clearing and Collection of Checks*, p. 131.

²⁰ For a detailed discussion of the use of clearing house loan certificates in the United States, see Spahr, W. E., *op. cit.*, Chapter V.

The collection of out-of-town checks.—In the collection of checks and drafts on banks in other localities, the process must almost necessarily be carried out by the banks for their customers. The individual recipients of such checks could scarcely present them to the drawee banks for encashment without the intervention of some agency to assist them in so doing. These individuals' own banks are the institutions most naturally and best suited to undertake this service. The banks themselves, however, need a centrally directed system if this function is to be performed efficiently and quickly. The absence of such a system prior to 1914 was one of the major defects of the national banking system, as the following description and analysis will demonstrate.

The collection process under the national banking system.—With the development of the custom of paying out-of-town debts by personal check, the banks of the United States, especially those located in the larger financial and commercial centers, received among their deposits ever-increasing numbers of checks drawn on banks outside of their immediate locality. It accordingly devolved upon the banks receiving such checks on deposit to collect them from the banks on which they were drawn.

The most simple and straightforward method of making these collections would have been to mail the checks directly to the drawee banks and let the latter remit the amount of the checks so received. The failure of the banks to follow this logical procedure resulted from the practice on the part of the drawee banks of exacting an exchange charge from the banks sending in such checks for payment. That is, instead of remitting the full face amount of the checks, the drawee banks would usually retain a small amount, equal to from $\frac{1}{10}$ to $\frac{1}{4}$ of 1 per cent of each \$100 or fraction thereof, the difference being remitted to the banks sending in the checks. The drawee banks defended this practice on fairly plausible grounds. Remittance had to be made either by the shipment of currency, which was expensive, or by a draft on New York or some other financial center. The latter method, which was the one generally followed, was also claimed to entail some expense to the drawee banks since it made necessary the maintenance by them of deposit

accounts in banks in one or more financial centers, thus tying up a considerable proportion of their assets in a form that yielded but a low rate of return.

While these arguments were in part justified, the banks receiving out-of-town checks on deposit were nevertheless faced with a loss of income by reason of exchange charges that it was to their interest to avoid if possible. The most reasonable solution of the difficulty, that of passing the charge on to the depositors of out-of-town checks, was generally precluded by the competition of the banks for deposits. Some other arrangement was therefore necessitated. The method finally arrived at was the collection of non-local checks through correspondent banks.

Collection of checks through correspondents.—This arrangement resulted in a wide variety of agreements among correspondent banks. Banks in different cities frequently agreed to collect for each other at par all checks drawn on banks located in their respective vicinities or throughout a designated territory. Country banks at times agreed to remit at par for checks sent them for payment by the city banks with which they had correspondent relations. More frequently, however, country institutions continued the practice of charging exchange even against their city correspondents, but in such an event they were expected to maintain balances with these city banks sufficiently large to compensate the latter for the loss resulting from the payment of the exchange charges. The city banks, on the other hand, practically always stood ready to collect their country correspondents' out-of-town checks at par, and thus found it necessary to keep balances at various points in order to collect these items without exchange deductions. The banks of some cities, probably overestimating the value to themselves of the deposits of other banks, made a bid for such balances by offering to collect out-of-town checks for depositing banks at par over a wide territory including a considerable number of states.

The country banks of various districts naturally established correspondent relations, for purposes of check collection, with banks in the financial centers to which their sections were tributary. "Thus the banks of New England, with

few exceptions, selected Boston and New York as their reserves cities. Those in the middle states selected New York and Philadelphia; the south Atlantic States selected Baltimore and New Orleans; the middle West was divided among Cincinnati, Cleveland, and Chicago, although Chicago exchange occupied the important place. All Michigan drew on Detroit. St. Louis was the center for the southern Mississippi valley and the Southwest; San Francisco for the Pacific Coast. But few were the banks that did not have at least one New York correspondent, New York exchange being in the greatest demand, as New York was and is the commercial and financial center of the country. Besides corresponding with the central reserve and reserve city banks, each bank corresponded with from three to a dozen banks in neighboring counties, among which the checks of each circulated freely and with which settlements were made weekly or semi-weekly, as the case supposedly required."²¹

Defects of the system.—The procedure followed in the collection of out-of-town checks gave rise to a number of drawbacks that held a prominent place among the weaknesses of our earlier banking system. Some of the more important of these evils were the following:

(1) In the first place, the proportion of bank assets held in the form of balances with other banks was much larger than would have been either necessary or desirable under a more efficient system. Even the small country banks found two or three accounts with correspondents necessary, while the number of correspondents of the large city institutions often ran into the hundreds or even thousands.²²

(2) A second defect resulted from the fact that banks receiving checks for collection from their correspondents followed the practice of giving immediate credit for such checks although some time was certain to elapse before they were actually collected. Since many of the banks were allowed to count balances with other institutions as part of their legal reserves, a considerable portion of the float (i.e., checks in the process of collection) was included in the legal

²¹ *Ibid.*, p. 100.

²² Watkins, L. L., *Bankers' Balances*, p. 103.

reserves of the banks, an evil that will receive more detailed comment in the following section of the chapter.

(3) In the third place, the collection of checks in the manner described was excessively costly, and the cost was unfairly distributed. The large city banks, which often agreed to pay exchange charges to their country correspondents while yet collecting checks for the latter at par, were frequently forced to absorb heavy expenses that were only partly offset by the so-called compensating balances maintained with them by the country institutions. Thus the city banks had either to suffer a loss of income or to recoup themselves by making higher charges than would otherwise have been necessary for various banking services not connected with the collection of checks. In either case, the country banks were allowed to make an undue profit from exchange charges at the expense of the city institutions or their customers.

The clearing house associations in some cities endeavored to assist their members in recovering some of the loss arising from the collection of out-of-town checks by requiring each member to levy a charge against the depositors of such items. This was often referred to as an *exchange charge*, but it will make for clarity if it is here termed an *interest charge*²³ to distinguish it from the exchange charges levied by drawee banks upon other banks sending checks to them for payment. This interest charge was perfectly legitimate since it was designed merely to cover the loss of interest suffered by the banks between the time of the deposit of out-of-town checks and the time of their payment. Such checks are not cash, and if a bank gives the depositor immediate credit on items of this sort, it is really extending him a loan of the funds during the period of collection and is entitled to charge interest on these amounts. The time required to collect out-of-town checks through correspondents, however, was often unduly extended, as will be shown directly, so that an interest charge of the sort described was excessive in the circumstances. Thus the depositors of out-of-town checks paid

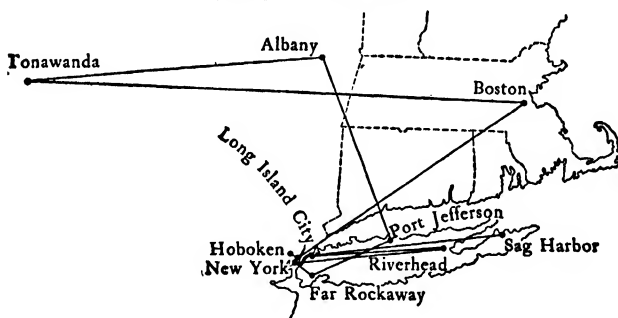
²³ Rodkey—in *The Banking Process*—uses the term “service charge” in this connection, but this is easily confused with the common bank service charge on small accounts, so that it is not used here.

a penalty because of the inefficiency of the prevailing collection methods.

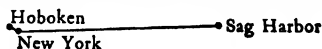
(4) Perhaps the most serious defect arising out of the system of collections then prevailing was the roundabout routing of checks in the process of collection. This was a natural result of the attempt on the part of banks having out-of-town checks to collect to avoid the payment of exchange charges on such items by sending them to correspondents for collection instead of mailing them directly to the drawee banks for payment. If all of the banks had sorted all of their out-of-town checks according to the locations of the drawee banks and had sent each check or bundle of checks to a correspondent in the immediate neigh-

ROUTE OF A CHECK

AN ACTUAL INSTANCE



UNDER THE FEDERAL RESERVE SYSTEM



DISTANCE 93 Miles
COLLECTION TIME 2 Days

BEFORE THE FEDERAL RESERVE

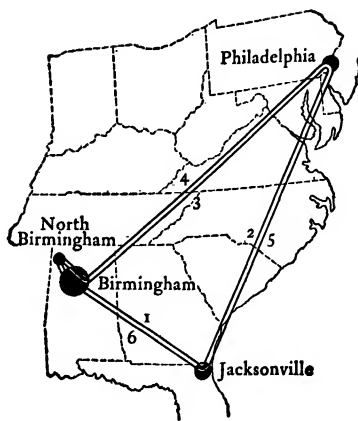
Check on Sag Harbor Bank deposited in Hoboken Bank

Sent to N. Y. C.	3 miles	To N. Y. C.	20 miles
To Boston	200 "	To Riverhead	75 "
To Tonawanda	405 "	To L. I. City	70 "
To Albany	210 "	To Sag Harbor	90 "
To Pt. Jefferson	105 "		
To Far Rockaway	45 "	In 10 days	1223 "

FIG. 9 (a)

MONEY AND BANKING

ROUTE OF A CHECK



BEFORE THE FEDERAL RESERVE

Check on No. Birmingham Bank deposited in Birmingham Bank

1. To Jacksonville, Fla.	488 miles	4. To Philadelphia	941 miles
2. To Philadelphia	817 "	5. To Jacksonville	817 "
3. To Birmingham	941 "	6. To Birmingham	488 "
Then to bank in No. Birmingham. Check not paid and returned to Birmingham Bank		Then by Birmingham Bank to depositor	
4 "		In 14 days	
		4500 "	

Under the Federal Reserve Collection by mail directly in 2 days

FIG. 9 (b)

Courtesy of the Federal Reserve Bank of Philadelphia

borhood of the drawee for collection, the system might have worked fairly well. At times, of course, this procedure was followed, but in many instances banks would send bundles of checks drawn on institutions in various sections of the country to any correspondent with which they wished to build up their accounts without regard to location.

The outcome of this last-mentioned practice was the routing of checks through devious and long channels before they were finally presented for payment. The diagrams in Figure 9 (a) and (b) are illustrative of two actual instances occurring prior to the establishment of the Federal Reserve System. Doubtless such cases were extreme, but the fact that

they could occur even infrequently is indicative of the weakness of the collection system then in use.²⁴

Few attempts at reform.—Although the evils of the collection process were apparent to a goodly number of bankers, only a few sporadic efforts at reform were instigated before the establishment of the Federal Reserve System. That nothing very significant in the way of a remedy was accomplished was probably a result of the inability to obtain concerted and centralized action on any plan of nationwide extent. While the loss of interest on checks in the process of collection was often large, it did not appear to be so great as the loss that would have been suffered from the payment of exchange charges had the checks been sent directly to the drawee banks for payment. There were several reasons why this was so. In the first place, the loss of interest resulting from the roundabout collection of checks was more or less offset by the fact that checks drawn by a bank's own customers and sent out of town were correspondingly delayed in their return to the bank for payment. In the second place, many of the banks were allowed to count balances with at least some of their correspondents as part of their required legal reserves which had to be maintained in any event. Checks sent to such correspondents for collection could be conveniently used as a means of maintaining these required reserve balances. Finally, the banks of some cities, such as New York, offset the loss of interest by exacting a charge of the type already described from the depositors of out-of-town checks.

From the foregoing discussion it would seem clear that the only feasible remedy for the evils of our earlier collection system lay in the elimination of those exchange charges levied by the drawee banks. So long as such charges persisted, it was not to be expected that the banks of the system would cease to follow the cumbersome and unsatisfactory method of collection through correspondents. As a matter of fact, the introduction and perfection of a more scientific collection process was forced to await the development of a centrally controlled system under the authority of the Federal Reserve Act.

²⁴ For still other defects, see Spahr, *op. cit.*, Chapter IV.

RESERVES UNDER THE NATIONAL BANKING SYSTEM

Scattered reserves.—One of the chief objections to the reserve arrangements under the national banking system usually cited was that the reserves of the banks were scattered throughout the country in the vaults of thousands of individual banks instead of being centralized. This objection is valid only in part. It will be recalled that the law required central reserve city banks and reserve city banks to maintain reserves equal to 25 per cent of their deposits, while a 15 per cent reserve was required of all other (country) banks. But the country institutions were permitted to keep three-fifths of their required reserves on deposit with approved national banks in reserve or central reserve cities, and the banks in reserve cities were allowed to deposit one-half of their legal reserve with approved central reserve city banks.

Under these regulations reserves were bound to be fairly widely scattered. Each national bank had to keep some portion of its required reserve in its own vaults, and the banks in central reserve cities maintained their entire legal reserves in cash. Furthermore, so far as the law was concerned, there was no reason why the redeposited portions of the country and reserve city banks' reserves should not themselves be widely scattered throughout the country. At the time of the passage of the Federal Reserve Act there were 49 reserve cities, the national banks of which might hold the deposited reserves of the country banks, and three central reserve cities whose banks might hold the deposited reserves of national banks located anywhere else in the country.

Another influence that, combined with the provisions of the law, made for scattered reserves was the method employed in collecting checks as described in the preceding section. In the process of collecting checks through correspondent banks, "each bank acquired a coterie of correspondents, the number varying with the size and importance of the bank, from two or three which might suffice for the small country bank to several thousand in the case of a large metropolitan institution."²⁵ Although not all of these

²⁵ Watkins, L. L., *Bankers' Balances*, p. 103.

balances, which were kept with correspondents, could be counted as legal reserve under the law, they were nevertheless part of the banks' working reserves and as such must be taken into account.

Concentration of reserves in New York City.—Despite the forces tending toward scattered reserves, there was a very considerable concentration of reserve deposits in New York city. Just prior to the passage of the Federal Reserve Act, on the call of February 4, 1913, the national banks of New York city held balances of other national banks amounting to \$374,000,000, as compared with a figure of \$811,000,000 for all the other national banks of the country. In addition, the New York national banks held \$322,000,000 of state bank and trust company balances as compared with \$805,000,000 of such deposits held by all other national banks. In other words, the national banks of New York city held three-tenths of the total of bankers' balances held by all the national banks of the country. Not only were bank deposits concentrated in New York but there was also a concentration within the city, eight banks holding over two-thirds of all the bankers' balances maintained with national banks of that city in October 1913.²⁶ Furthermore, in November 1912, these eight banks had out-of-town (bankers') accounts numbering 15,064 out of a total of approximately 25,000 banks in the United States.²⁷

The explanation of this concentration of reserves is not difficult. New York city was the financial center of the country and, as such, attracted deposits from banks all over the United States. New York had attained this position even before the establishment of the national banking system and had consequently been designated as the sole central reserve city in the original National Bank Act. This designation increased the financial importance of the city since deposits of other national banks with banks in New York could be counted as part of the required reserves of the former institutions. Another factor that added to the amount of bankers' balances held by the New York banks was the practice of paying interest on such balances by certain banks

²⁶ The foregoing data are to be found in various tables in Watkins, *op. cit.*

²⁷ *Ibid.*, Table 4, p. 21.

in the city. The banks of other centers also offered this inducement, paying a higher rate of interest at times than did the New York institutions, but New York had advantages as a financial center that the other cities lacked. As a result its bankers' deposits assumed the position of outstanding importance already described.

Whatever complex of causes, legal and natural, were responsible for New York's financial supremacy, once this position had been attained, the desirability to the interior banks of maintaining balances in New York was unquestioned. So long as all other banks did the same, a New York draft formed an acceptable means of payment of practically any type of banking obligation outside of the home city, such as remitting payment of checks, repaying funds borrowed from an outside institution, etc. This was true because the bank receiving payment in this form, itself having an account in New York, could send the draft to its New York correspondent for collection and credit to its account.

To the extent that outside payments were made by means of drafts on New York, that city became a sort of clearing center for the banks of the entire country. That it acted in this capacity to a significant degree is shown by the fact that "from information provided by 3329 of the 3428 national banks, it was found that in 1890 all but three drew drafts upon New York, and that the total amount of such drafts was 61.31 per cent of all the drafts drawn upon all the banks of the country."²⁸ Whether for making individual or banking payments, it is clear that New York drafts were an acceptable means of payment throughout the entire country.

Before the establishment of the Federal Reserve System, then, the reserves of the banks were partly scattered and partly concentrated in New York city. But in no system of many thousands of individual banks can the reserves be entirely concentrated in one place. Some reserve is necessary at each bank or office and only a portion may be concentrated in any one locality. It therefore becomes pertinent

²⁸ Sprague, O. M. W., *History of Crises under the National Banking System* p. 126.

to inquire the reasons for the almost universal condemnation of our earlier reserve organization by students of the subject.

Defects of the old system.—Five major defects have received attention in this connection. First, the New York banks, which held the bulk of the balances of the interior banks, were not satisfactory reserve depositories. Second, the working reserves of the banks as a whole were undesirably large. Third, apparent reserves were fictitious to a significant extent. Fourth, the legal reserve requirements of the National Bank Act were too rigid. Fifth, there was no centralized control of reserves. We shall consider each of these objections briefly in the order given.

New York banks unsatisfactory reserve depositories.—While the idea of maintaining reserve balances in the financial center of the country was itself unobjectionable, the New York banks that held these deposits were not satisfactory reserve agents. The reason for this is to be found largely in the failure of these institutions to keep reserves of cash large enough to meet the demands of their bank depositors in times of strain. The failure to keep adequate reserves was, in turn, a direct result of the pernicious practice of paying interest on bankers' balances. The New York banks were avowedly profit-making institutions, but in order to pay interest on these balances and still show a profit it was necessary for them to keep their idle cash reserves at the lowest point compatible with the law.

The New York banks recognized, however, that they might be called upon to pay considerable proportions of these balances from time to time, and hence they tried to invest them in such fashion that they might be recalled at will. The system of daily settlements at the New York Stock Exchange made the "call loan" to stockbrokers appear to fit the need. In ordinary times, if a banker called some of his loans to brokers, the latter would merely transfer the called loans to some other bank. This procedure worked well enough as long as there was some other bank (or banks) willing and able to take over these called loans. In periods of emergency, however, when, because of heavy demands from the interior banks, all of the New York institutions attempted to call their loans at the same time, the

situation became disastrous. Having nowhere to turn for loans, the brokers could only forfeit their collateral or sell it on the market for what it would bring. In such circumstances the market naturally broke badly, preventing further sales of stock except at heavy losses.

Thus, in times of stress, the New York banks found their liquid call loans solidly frozen. The calling of a relatively few loans sent call money soaring upward and intensified the disturbance. As a result comparatively few loans were called and the banks were forced to rely upon their too meager cash reserves to meet demands for currency from the interior.

In spite of their inadequate reserves, the New York banks might have met the various emergencies that they were compelled to face without suspending payments to their bank depositors if they had acted completely in unison. The experience of 1873 seems to indicate that the practice of equalizing reserves, together with the issuance of clearing house loan certificates for the payment of clearing balances, would have prevented suspension in the later crises. Equalization of reserves was not resorted to, however, after 1873, and the use of the loan certificates without equalization did not prevent suspension from taking place.²⁹ When the New York banks suspended, interior banks perforce followed suit and the whole credit system of the country was temporarily deranged.

Unduly large working reserves.—Turning our attention from the New York banks to the banking system as a whole, it is to be noted that the working reserves (cash plus balances) of the banks as a group were much larger than would have been necessary under an efficient system. This was very largely the result of the roundabout methods of check collection described in the preceding section. If checks were to be collected through correspondents, it was necessary to maintain a number of balances with various banks to effect collection in this manner. Under a more efficient system of collection through a central agency, one account might have taken the place of several or many maintained under the existing system. Many of the accounts were also larger

²⁹ *Ibid.*, especially pp. 182-83.

than necessary because of the requirement of compensating balances by collecting correspondent banks.

Fictitious reserves.—Nevertheless, real reserves were not so large as they appeared, which was in itself a source of danger. Banks were permitted to count checks in the mail as part of their balances with correspondents, even though the checks had not as yet reached the latter, to say nothing of being finally collected. This float, estimated at from \$300,000,000 to \$500,000,000 in 1907,³⁰ could by no stretch of the imagination be actually used to meet claims of depositors.

Even if uncollected items had not been counted, the reserves would have been in part fictitious as a result of the legal permission to redeposit a part of them in other banks. To illustrate, a country bank with deposits of \$1,000,000 might keep a reserve of only \$60,000 in its own vaults and deposit \$90,000 with a reserve city bank. Against this reserve deposit the reserve city bank would have to maintain a reserve of \$22,500, of which \$11,250 might be redeposited in a central reserve city bank. The latter would have to keep a cash reserve of \$2812.50 against this deposit. Thus the total cash reserve held against the million dollars of country bank deposits would be only \$74,062.50. The redepositing of reserves is not objectionable if the depository bank keeps a large cash reserve and maintains a highly liquid condition. Under the national banking system, however, the redepositing of reserves in ordinary commercial banks was a distinct source of danger.

Rigid legal reserve requirements.—In addition to the drawbacks already mentioned, the rigidity of the legal reserve requirements was a complicating factor. Under the National Bank Act the banks were not allowed to expand their loans or investments after the reserve ratio had fallen below the specified minimum, such prohibition to remain in force until the required reserve had again been attained.

This requirement had two bad effects. First, it focussed attention too sharply on the necessity of maintaining a specified reserve rather than a reserve that was adequate. It made the banks feel that the maintenance of a reserve of a

³⁰ Watkins, L. L., *op. cit.*, p. 68.

particular size was more significant than it really was. In the second place, it prevented the banks from taking the proper action in emergencies. In a crisis a bank should extend loans to all solvent customers and should meet all demands for hand-to-hand money from its depositors. The former of these principles could not be followed without breaking the law. This was bound to bring confusion in times of stress. The attitude created by the reserve requirements caused the interior banks to withdraw a larger proportion of their balances from New York than was necessary and prevented the New York banks from handling an emergency situation satisfactorily. The latter institutions did, it is true, expand their loans in time of crisis in abrogation of the law, but not to the extent that they might have done otherwise.

The legal reserve requirements of the National Bank Act were doubtless necessary in a system of many thousand individual banks. Nevertheless, they operated to enhance the other difficulties of the reserve situation. While they served to limit expansion of credit, they did so in an unfortunate manner. Restraint on credit expansion should be introduced early in the state of overexpansion. Then, if overexpansion is not checked and a crisis should occur, the reserves should be capable of being used to the last dollar to meet the emergency. Under the earlier system, the expansion went on unchecked until the reserve limit was reached, when it was brought to a dead stop with disastrous consequences.

Lack of centralized control.—Finally, the lack of any centralized control was an undoubted drawback. Even a minimum of unified action, such as the complete co-operation of the New York banks, would have forestalled some of the more drastic situations that materialized from time to time during the period under review. The lack of any co-ordinated action, combined with the other prevailing evils of the system, served to intensify disturbances that might otherwise have had less far-reaching effects.

OTHER DEFECTS

Unsatisfactory foreign exchange arrangements.—In addition to the major defects, already described, the national banking system developed certain less significant failings.

The National Bank Act did not permit banks organized under it to accept drafts drawn on them by either foreign or domestic merchants. This effectively prevented the large New York banks from financing American exporters and importers, practically all of our foreign trade being financed through London. New York, therefore, although the financial center of the country, had no opportunity to develop into an international financial center of any importance whatever. Since London carried out this function with great efficiency, however, the lack of an acceptance market in New York cannot be considered as a vital drawback to the country's foreign trade financing. There is little doubt, on the other hand, that the absence of an active acceptance market in this country was in part responsible for the resort to call loans to brokers as a major secondary reserve investment by the New York banks.

Poor working relations with the Treasury.—The National Bank Act did allow the Treasury to deposit certain funds with national banks, and also provided that such institutions, if called on, should act as fiscal agents for the government. Nevertheless, the bulk of the government's receipts were held in the form of cash in the independent treasury and sub-treasuries, which resulted in alternate withdrawals of funds from and accessions to the banks. This, in turn, led to alternate periods of tight and easy money that were undesirable. Moreover, the policy of certain Secretaries of the Treasury of depositing government funds with certain banks in time of stress, although well-intended, was not satisfactory, since it gave too much power over the banking and credit situation to a political official. On the whole, a revamping of the relations between the banks and the Treasury was much to be desired.

Conclusion.—The unsatisfactory organization of the national banking system, as depicted in the foregoing pages of this chapter, was almost certain, sooner or later, to lead to efforts at reform; and, in fact, agitation for reform broke out from time to time toward the close of the period prior to the establishment of the Federal Reserve System. Nevertheless, the crisis of 1907 had to be endured before any sustained attempts to remedy the situation put in an appearance.

The Aldrich-Vreeland Act of March 30, 1908, which provided for emergency issues of bank notes by groups of national banks, was avowedly a temporary measure of a palliatory rather than a remedial nature, designed to fill the breach until constructive, fundamental legislation could be enacted. The latter being the end in view, the Aldrich-Vreeland Act created a National Monetary Commission to make a thorough study of banking conditions in this and other countries and to file a report that could be used as a basis for the proposed legislation.

The National Monetary Commission, after four years of effort, submitted in 1912 a most comprehensive report of over forty volumes, which included treatises on nearly every phase of banking in this and many foreign countries. A reform bill, known as the Aldrich bill, was also submitted and became the forerunner of the Federal Reserve Act. The following chapter will be devoted to a consideration of the latter measure and its effect upon the American banking system.

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CHAPTER 9

THE FEDERAL RESERVE SYSTEM

The Aldrich Plan.—The proposed legislation of the National Monetary Commission was submitted to Congress under the title of the Aldrich Bill. It provided for a central bank, known as the National Reserve Association, to be located at Washington, with one branch in each of fifteen districts into which the country was to be divided. Its capital of \$300,000,000 was to be subscribed by national banks and by state banks and trust companies which would meet certain requirements of the national law. The subscribing banks were to form local associations of ten or more banks each and were to elect boards of directors for these local associations. The board of directors of the local associations of each district were, in turn, to elect the board of directors of the district branch with the exception of the branch manager who was to be appointed by the governor of the parent association in Washington. The National Reserve Association itself was to have a board of directors in part elected by the boards of the branches, in part *ex officio*, and in part appointed by the President of the United States. Provision was also made for the selection of an executive committee from this board.

The National Reserve Association was given the power to rediscount paper for the subscribing banks, to hold deposits for these banks without the payment of interest thereon, to hold the deposits of the United States, to fix a rate of discount that must be uniform throughout the country at all branches, to transfer funds from one branch to another, to open foreign accounts and trade in foreign paper, to buy and sell gold coin and bullion, and to invest in United States bonds. Frequent reports of conditions were to be made to the Comptroller of the Currency. The notes of the Reserve Association, against which a 50 per cent reserve was required, might be issued to the extent of \$900,000,000, although both the reserve requirement and the specified maximum issue

might be temporarily suspended upon the payment of a special tax.

Certain changes in national bank legislation were also provided. The national banks were not to be allowed to increase their circulation, and any part of the existing circulation that was retired might not be reissued, the aim being gradually to eliminate all note issues other than those of the National Reserve Association. The powers of the national banks were to be broadened somewhat in other directions to permit the acceptance of prime bills, the extension of loans on real estate, and the transaction of a trust business.

The Aldrich bill never received full discussion in either house of Congress¹ and stood no chance of becoming law after the shift in power to a Democratic regime with the election of Woodrow Wilson in 1912.² The bill was supposed to be a non-partisan measure, but it was bound to be associated with the Republican Party under whose auspices it had come into being. Even had this element played no part, the traditional Democratic opposition to a concentration of financial power would have prevented the passage of a measure providing for a single central bank.

President-elect Wilson, however, was fully aware of the need for reform legislation in the banking sphere and, even before his inauguration, work was begun on a Democratic measure that should retain the desirable features of the Aldrich plan, while eliminating the elements of that plan that either were hostile to Democratic ideals or seemed to be incompatible with sound banking policy. This measure was introduced into Congress under the short title of the Federal Reserve Act shortly after President Wilson came into office. It was debated in Congress for some months, but was finally passed with comparatively little revision and became law on December 23, 1913.

THE FEDERAL RESERVE ACT

Federal Reserve districts.—The Federal Reserve Act avoided the difficulty of a single central bank by providing

¹ Willis, H. P., *The Federal Reserve System*, p. 85.

² The House had become Democratic even before Wilson took over the reins of government.

for a regional system. An organization committee, composed of the Secretary of the Treasury, the Secretary of Agriculture, and the Comptroller of the Currency, was directed to designate not less than eight and not more than twelve cities to be known as Federal Reserve cities, and to divide the United States into a corresponding number of districts, each to contain one Federal Reserve city. In fixing the boundaries of the several districts, the committee was authorized to act "with due regard to the convenience and customary course of business." Each district thus decided upon was to be known as a Federal Reserve district, and in the Federal Reserve city of each district there was to be organized a Federal Reserve bank, which was to act as a central bank for its district.

Federal Reserve banks.—The Act provided that each Federal Reserve bank was to have a minimum subscribed capital of \$4,000,000. This capital was to be subscribed by member banks in the amount of 6 per cent of the latter's unimpaired capital and surplus. All national banks were required to become members of the system and state banks might join by meeting certain specified requirements of the Act concerning capital and reserves. If member bank subscriptions were not sufficient in any Federal Reserve district to meet the \$4,000,000 minimum requirement, Federal Reserve bank stock was to be offered to the public, and, if even the sale of this stock failed to meet the minimum requirement, the unsubscribed difference was to be allotted to the Treasury.

Federal Reserve bank stock was non-transferable, but the amount might be increased or decreased with increases or decreases of member banks' capital and surplus. The Reserve banks were to pay cumulative dividends amounting to 6 per cent per annum on their paid-in capital stock. Earnings in excess of this amount were to go to the government as a franchise tax except that 50 per cent of such excess earnings was to be carried to surplus until the surplus account should amount to 40 per cent of the Reserve bank's paid-in capital, after which all excess earnings were to go to the government.

The management of each Federal Reserve bank was to be vested in a board of nine directors, three Class A, three Class B, and three Class C directors. Class A directors, representing banking, and Class B directors, representing

commerce and industry, were to be elected by the member banks. Class C directors were to be appointed by the Federal Reserve Board at Washington. One of these was to be designated Federal Reserve agent and chairman of the board and a second was to be designated deputy Federal Reserve agent and chairman. Reserve banks might establish branches with boards of seven directors, four of whom were to be selected by the parent Reserve bank, the other three to be appointed by the Federal Reserve Board.

The Federal Reserve banks were given typical central banking powers. They were authorized to receive deposits and to collect checks for member banks. Each Reserve bank was to act as a clearinghouse for its member banks and the Federal Reserve Board was empowered to designate one of the Reserve banks or to appoint its own agent to act as a clearing agency for the several Reserve banks and their branches.

Federal Reserve banks might discount for member bank notes, drafts, and bills of exchange, where the proceeds were to be used or had been used for a commercial, industrial, or agricultural purpose. Commercial and industrial paper had to have a maturity of not more than ninety days at the time of discount, while agricultural paper might have a maturity of six months. Paper, the proceeds of which had been used or were to be used for carrying or trading in securities, other than bonds and notes of the United States, was not eligible for discount at the Reserve banks. Acceptances based on the exportation or importation of goods and having not more than three months to run might also be discounted for member banks.

Although the operations of the Reserve banks were confined largely to business with the member banks, certain dealings in the open market were permitted. Thus, the Reserve banks were given the power to buy and sell in the open market cable transfers, bankers' acceptances, and bills of exchange of the type made eligible for discount. They were also permitted to deal in gold coin or bullion at home or abroad, to make loans thereon, to exchange Federal Reserve notes for gold, and to contract loans of gold coin or bullion, giving suitable security therefor. They were further empowered to buy and sell, at home or abroad, bonds and notes

of the United States and certain warrants, bills, notes, and revenue bonds of political subdivisions, the latter to have a maturity of not more than six months. They might open accounts in foreign countries with the permission of the Federal Reserve Board, appoint foreign correspondents, and establish foreign agencies with banking powers if necessary or desirable to do so.

As a corollary of the power to discount paper, the Reserve banks were authorized to fix rates of discount for each class of paper, such rates to be determined with a view to accommodating commerce and business and to be subject to the review and determination of the Federal Reserve Board.

The Federal Reserve banks were authorized to issue Federal Reserve notes and Federal Reserve bank notes. Federal Reserve notes were to be issued to the Federal Reserve banks through the Federal Reserve agents at the discretion of the Federal Reserve Board. A Federal Reserve bank wishing to procure these notes was to make application to its Federal Reserve agent for the amount of notes required, the application to be accompanied by the tender of collateral security equal in amount to the sum of the notes applied for. The collateral security thus tendered was to consist of notes and bills accepted for rediscount and was to be held in the custody of the Federal Reserve agent after delivery of the notes. The Federal Reserve Board was authorized to call upon any Reserve bank at any time for additional security to protect the notes issued to it.

Federal Reserve notes were made obligations of the United States and were to be redeemable in gold at the Treasury Department in Washington, or in gold or lawful money at any Federal Reserve bank. A Federal Reserve bank redeeming or receiving on deposit the note of another Reserve bank was not allowed to pay out such notes under penalty of a 10 per cent tax, but was directed to return them to the issuing bank for payment.

Each Federal Reserve bank was required to maintain a reserve in gold of not less than 40 per cent of its notes in circulation and a reserve in gold or lawful money of not less than 35 per cent of its deposits. A part of the reserve against notes equal to not less than 5 per cent of the notes

in circulation was to be held with the Treasury Department against Federal Reserve notes there presented for redemption. Each Reserve bank was permitted to reduce its liability for outstanding notes by depositing its own notes, gold, gold certificates, or lawful money with its Federal Reserve agent, the gold, gold certificates, or lawful money so deposited to be used by the agent solely for the purpose of exchange for outstanding Federal Reserve notes when the latter should be presented to him by his Reserve bank.

In an inadequate effort gradually to eliminate the national bank note, a provision was included in the Act permitting the issuance by the Reserve banks of bond-secured bank notes called Federal Reserve bank notes. The Reserve banks were required to purchase annually at par and accrued interest from the national banks 2 per cent bonds having the circulation privilege to the amount of \$25,000,000 or such portion thereof as might be offered by the national banks. The bonds so purchased might then be used as security for Federal Reserve bank notes or exchanged for 3 per cent obligations of the United States without the issue privilege. This provision failed utterly to accomplish its purpose and needs no further consideration.

Legal sanction was given to certain relations between the Reserve banks and the Treasury by Section 15 of the Act, which provided that "the moneys held in the general fund of the Treasury except the 5 per centum for the redemption of outstanding national-bank notes and the funds provided in this Act for the redemption of Federal Reserve notes may, upon the direction of the Secretary of the Treasury, be deposited in Federal Reserve banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States; and the revenues of the Government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits." It was provided, however, that the Secretary of the Treasury might also use member banks as depositories for government funds.

The Federal Reserve Board.—For the purpose of coordinating the major policies of the Federal Reserve banks and securing a measure of centralization in the regional sys-

tem, a Federal Reserve Board of seven members was created by the Act. Two of the members, the Secretary of the Treasury and the Comptroller of the Currency, were to hold their positions on the board *ex officio*, while the other five were to be appointed by the President of the United States. Not more than one of the five appointed members was to be chosen from any one Federal Reserve district, and the President was directed to have due regard to a fair representation of the different commercial, industrial, and geographical divisions of the country in selecting the appointive members.

In choosing the first appointive members, one was to be appointed for two years, one for four, one for six, one for eight, and one for ten years, and thereafter each appointment was to be for ten years. At least two of the members appointed by the President were to be experienced bankers, and one of the appointive members was to be designated as governor of the Federal Reserve Board and was to be its chief administrative officer. The Secretary of the Treasury, however, was made the chairman of the board.

The Federal Reserve Board was to be located in Washington, and the Secretary of the Treasury was authorized to assign offices in the Treasury Department for the use of the Board.

The powers and functions of the Federal Reserve Board were of two types. One type included those powers that were designed to give the Board control over those phases of banking and credit policy that affect the banking and credit structure as a whole. For this purpose the Board was given the power to define the character of paper eligible for discount within the meaning of the Act, to review and determine rates of discount established by the several Reserve banks, to equalize the reserves of the Reserve banks by requiring certain Reserve banks to discount paper for others, to suspend the reserve requirements against notes and deposits of the Reserve banks upon the payment of a graduated tax, to regulate open market operations of the Reserve banks, and to regulate at its discretion the issuance of Federal Reserve notes to the Reserve banks.

The second group of powers was to permit effective supervision of the Federal Reserve banks by the Board and to insure

the soundness of their operation. To these ends the Board was given the power to examine each Federal Reserve bank and to require statements and condition reports, to suspend or remove any Reserve bank officer or director for due cause, to require the writing off of doubtful or worthless assets, to suspend any Federal Reserve bank for violation of the law and to liquidate or reorganize such bank if desired, to require bonds of Federal Reserve agents and to provide safeguards for money or property placed with such agents, and to exercise general supervision over the Federal Reserve banks.

The Federal Advisory Council.—As another link between the Reserve banks and their members on the one hand and the Federal Reserve Board on the other, the Act created a Federal Advisory Council, to consist of one member from each Federal Reserve district. The members of the council were to be selected annually by the boards of directors of the Federal Reserve banks, each member to receive such compensation, subject to the approval of the Federal Reserve Board, as the board of directors of the Reserve bank selecting him might determine.

The Federal Advisory Council was authorized to meet with the Federal Reserve Board at Washington at least four times a year, and was to have the power (1) to confer with the Federal Reserve Board on general business conditions; (2) to make representations concerning matters within the jurisdiction of the Federal Reserve Board; and (3) to obtain information and make recommendations concerning matters of banking and credit policy in the various districts or in the system as a whole.

Member bank provisions.—The Federal Reserve Act also contained a number of important provisions relating to member banks. These had to do with reserve requirements and with various phases of member bank business.

Changes in reserve requirements.—With the establishment of a group of regional central banks with the power to receive deposits from and make advances to member banks, it was natural to expect some relaxation of the rigid and fairly high reserve requirements of the National Bank Act. The original Federal Reserve Act accordingly introduced a new set of reserve requirements for national and member state

banks. The former classification of central reserve city, reserve city, and all other banks was retained, but the required legal reserve for banks in these three groups was reduced from 25, 25, and 15 per cent of all individual deposits to 18, 15, and 12 per cent of demand deposits. A distinction in the reserve to be held against demand and time deposits thus was recognized, a 5 per cent minimum reserve being required against time deposits in all three classes of banks.

The legal reserves thus specified were to be held partly in the member banks' own vaults and partly in the form of deposits with the Federal Reserve banks. The proportions in which the reserves were to be distributed between the member banks and the Federal Reserve banks are shown in Table 5. A period of three years was allowed for the transfer

TABLE 5

MEMBER BANK RESERVES UNDER THE ORIGINAL FEDERAL RESERVE ACT

Banks located in	Against demand deposits				Against time deposits per cent
	Total per cent	Proportion required to be held in			
		(1) Own vaults	(2) Fed. Res. Bk.	(3) Either (1) or (2)	
Central reserve cities.....	18	6/18	7/18	5/18	5
Reserve cities..	15	5/15	6/15	4/15	5
All other.....	12	4/12	5/12	3/12	5

of reserves from other depository banks to the Federal Reserve banks.

Fiduciary powers.—Section 11 of the Federal Reserve Act gave the Federal Reserve Board the power to grant by special permit to national banks applying therefor the right to act as trustee, or in any other fiduciary capacity in which state banks or trust companies are permitted to act. National banks acting in this capacity were required to segregate all fiduciary assets from the general assets of the bank and to maintain a separate set of books and records for all fiduciary transactions.

Time deposits and real estate loans.—Two provisions of the Federal Reserve Act enabled the national banks to compete to some extent with the state banks for a savings bank

business. In the first place, a distinction was made between demand and time deposits and the minimum reserve required to be held against the latter was much smaller than the reserve against demand deposits, as already noted in the preceding section. Secondly, national banks were granted the power to make loans secured by real estate, a profitable type of savings bank business.

The original Federal Reserve Act permitted national banks not located in central reserve cities to make loans on unencumbered and improved farm land for periods of not more than five years. Such loans could be made in amount not to exceed 25 per cent of the lending bank's capital and surplus or one-third of its time deposits, and were not to exceed 50 per cent of the appraised value of the real estate offered as security.

Acceptances.—The Federal Reserve Act permitted member banks to accept drafts or bills of exchange growing out of the importation or exportation of goods and having not more than six months' sight to run. The total of such acceptances was limited to 50 per cent of the accepting bank's capital and surplus.

Branches.—National banks with a capital and surplus of \$1,000,000 or more might apply to the Federal Reserve Board for authority to establish branches in foreign countries or dependencies of the United States.

DEVELOPMENT OF THE SYSTEM

Federal Reserve banks.—The Federal Reserve Act was amended on a number of occasions before the great depression, and we may consider these legislative changes, in relation to World War I, under the heads of prewar, wartime, and postwar amendments.

Prewar amendments.—The only prewar amendment to the Federal Reserve Act with which we need be concerned is the act of September 7, 1916. By this act the Federal Reserve banks were authorized to receive on deposit from member banks all checks and drafts payable on presentation, and also to receive maturing bills for collection. They were empowered, in addition, to receive such checks, drafts, and bills for purposes of exchange or collection from other Fed-

eral Reserve banks. Prior to this the Reserve banks had not been permitted to receive maturing bills for collection nor had they been allowed to receive on deposit or for exchange checks and drafts on nonmember banks.

By this same amendment the Federal Reserve banks were authorized to make advances to member banks on the promissory notes of the latter for periods of not more than fifteen days, such notes to be secured by eligible paper or obligations of the United States.

The amendment further permitted Federal Reserve banks to open banking accounts for foreign correspondents with the consent and approval of the Federal Reserve Board.

Wartime amendments.—The act of June 21, 1917, made a number of changes affecting the Federal Reserve banks. The membership of state banks in the system was encouraged by the provision that such banks joining the system should retain their full charter and statutory rights as state banks and by permitting state bank members to withdraw from the system upon six months' written notice. In addition to this, the Reserve banks were permitted to receive for clearance or collection from nonmember banks checks, drafts, and maturing items, provided that these banks maintained sufficient balances with the Reserve banks to offset the items in transit held for their accounts by the Reserve banks. Finally, in order to assist the concentration of gold in the Federal Reserve banks for war purposes, the issuance of Federal Reserve notes upon the security of gold, as well as commercial paper, was permitted. Any gold so turned over to the Federal Reserve agent as security for Federal Reserve notes might also be counted as part or all of the 40 per cent reserve required to be held against such note issues.

Postwar amendments.—By an act of March 3, 1919, just following the war, the distribution of Reserve bank earnings was substantially altered. All net earnings in excess of the 6 per cent dividend to member banks were to be carried to surplus until the surplus account should amount to 100 per cent of the Reserve bank's subscribed capital, after which 10 per cent of the excess earnings was to be carried to surplus and the other 90 per cent was to be paid to the government as a franchise tax.

After the crisis of 1920 the agricultural interests of the country suffered from a substantial and prolonged depression. On the basis of the difficulty of the farmers, the farm bloc in Congress was instrumental in obtaining the passage of certain measures amending the Federal Reserve Act in the interests of agriculture. By an act of June 3, 1922, the number of appointive members on the Federal Reserve Board was increased from five to six, the added member to be representative of the agricultural interests of the country. The earlier provision that two of the appointive members of the Board must be experienced bankers was also removed by this act.

The Agricultural Credits Act of March 4, 1923, amended the Federal Reserve Act by (a) permitting state banks to become members of the system with a capital of 60 per cent of the minimum before required; (b) permitting the discount and purchase by the Reserve banks of sight bills of exchange drawn to finance the shipment of non-perishable agricultural commodities; (c) permitting the discount by the Reserve banks of agricultural acceptances with a maturity of six months and the rediscount of agricultural paper with a maturity of nine months, the latter to include the paper of co-operative marketing organizations; and (d) permitting the discount by the Reserve banks of agricultural paper for the Federal intermediate credit banks that were established by the act, and authorizing the purchase and sale in the open market of the debentures issued by the latter institutions.

The act of February 25, 1927, contained for the most part provisions affecting the national and state member banks. It did affect the Reserve banks in one important respect, however, by substituting indeterminate charters for the 20-year charters granted to these institutions by the original Federal Reserve Act.

We may now turn attention briefly to some of the more important administrative developments of the system.

The organization of the system.—With the passage of the Federal Reserve Act the task of organizing the new system was immediately commenced. The organization committee, after an exhaustive investigation, divided the country into the maximum number of twelve districts with Federal Re-

serve banks located at Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco. Although certain minor changes in district boundaries were later made by the Federal Reserve Board, the existing district divisions follow closely the original lines determined by the organization committee. The districts were so laid out that the stock subscriptions of member banks in each district were sufficient to provide the \$4,000,000 minimum capital required by law without necessitating the sale of Federal Reserve bank stock either to the public or to the government.

While the organization committee proper was engaged in districting the country and deciding upon the locations of Federal Reserve cities, a technical organization committee of experts, under the direction of H. Parker Willis, drew up by-laws for the Federal Reserve Board and for each of the Reserve banks, and arranged other preliminary matters concerning internal organization and policies. In this manner the Board and the Reserve banks were enabled to get under way with a minimum of difficulty. The original members of the Federal Reserve Board took the oath of office on August 10, 1914, and the Federal Reserve banks opened their doors for business on the 16th of the following November.

Governors of the Federal Reserve banks.—The Federal Reserve Act made no specific provision for administrative heads of the Reserve banks, comparable with the presidents of the member banks, and it early became necessary for the Federal Reserve Board to decide whether or not such officials should be designated. After due deliberation and inquiry, the Board authorized the board of directors of each Federal Reserve bank to select a chief administrative official for its bank to be known as governor. This accordingly was done.

One peculiarity of the office of governor was that the Reserve banks did not show a disposition to select members of their own boards of directors for this office. The result was that the governor, in many instances the most important single officer of the bank, was not a member of the board of directors and was not entitled to vote at meetings of the board. In practice, he met with the board of directors, al-

though not a member, and was usually also appointed to the executive committee of the board. The situation was not entirely satisfactory, but seemed to be the most feasible working arrangement possible under the Federal Reserve Act,³ prior to 1936.

Conferences of governors and agents.—The governors of the Federal Reserve banks soon organized a conference of governors, and this body met regularly twice a year with the Federal Reserve Board at the call of the latter body to discuss banking problems of mutual interest and to make recommendations or suggestions. The Federal Reserve Board also calls an annual conference of Federal Reserve agents for purposes of discussion and mutual exchange of views. These two conferences, together with the meetings of the Federal Advisory Council, enabled the Board to maintain close contact and satisfactory working relations with the various important elements in the system.

The open market policy conference.—There was organized in 1922 an open market investment committee consisting of the governors of four of the Reserve banks, a fifth being added later, to co-ordinate and unify the open market sales and purchases of the Federal Reserve banks. By a ruling adopted on March 25, 1930, the Federal Reserve Board abolished the open market investment committee and substituted therefor an open market policy conference to consist of one representative from each Federal Reserve bank. The conference met with the Federal Reserve Board upon the call of the governor of the Board or of the chairman of the executive committee of the conference after consultation with the governor of the Board. The executive committee referred to consisted of five members selected by and from the members of the conference for a period of one year with full power to act in the execution of the policies adopted by the conference and approved by the Federal Reserve Board.⁴

In practice, the representatives selected by the Reserve banks as members of the conference consisted of the governors of the respective Reserve banks, so that the composition

³ See Willis, H. P., *op. cit.*, pp. 687 ff.

⁴ See *Operation of the National and Federal Reserve Banking Systems*, Hearings before a subcommittee of the Senate Committee on Banking and Currency, Part 1, p. 158.

of the open market policy conference was identical with that of the conference of governors, but the two conferences acted in different capacities. The executive committee of the open market policy conference was composed of the governors of the Federal Reserve banks of New York, Boston, Philadelphia, Cleveland, and Chicago, and coincided with the membership of the old open market investment committee.⁵

Publicity and research.—Contact between the Federal Reserve Board and the public (including the member banks) is maintained through the publication monthly of the Board's official organ, the *Federal Reserve Bulletin*, and the publication annually of its report to the House of Representatives. The Board maintains an efficient division of research and statistics that is continuously engaged in the analysis of banking problems and the gathering of important statistical data. As new data or analyses become available, they are published in the *Federal Reserve Bulletin* in addition to condition reports, regulations, and other information included therein.

Member bank amendments.—Later legislation amended the law regarding member banks in certain particulars. With respect to real estate loans, the amendment of September 7, 1916, permitted the inclusion of loans secured by improved urban real estate up to 50 per cent of the value of the property, with a maturity of not more than one year. Later, the McFadden Act of February 25, 1927, changed the limit on total real estate loans to 25 per cent of the lending bank's capital and surplus or one-half its savings deposits, whichever was greater, and permitted urban real estate loans with a maturity up to five years. Banks in central reserve cities were also permitted to grant real estate loans under this amendment, a power denied them under the original Federal Reserve Act.

Under the same act (Sept. 7, 1916), the power to accept drafts and bills of exchange was broadened to permit the acceptance of those drafts or bills:

(a) Which grow out of transactions involving the importation or exportation of goods,

⁵ The open market policy conference was legalized by the Banking Act of 1933 and altered greatly by the Banking Act of 1935.

(b) Which grow out of transactions involving the domestic shipment of goods, provided shipping documents conveying or securing title are attached at the time of acceptance,

(c) Which are secured at the time of acceptance by warehouse receipts or other such documents conveying or securing title covering readily marketable staples,

(d) Drawn (under regulations to be prescribed by the Federal Reserve Board) by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in the respective countries, dependencies, or insular possessions.

The authority granted to the Federal Reserve Board, under the amendment of March 3, 1915, to permit national banks to accept bills and drafts up to 100 per cent of their capital and surplus (not more than half of which could be based on domestic transactions) was inadvertently omitted in the act of September 7, 1916, but was again restored by the act of June 21, 1917.

The power to establish foreign branches remained unchanged, but the amendment of 1916 gave banks with a capital and surplus of \$1,000,000 or more the added right of applying to the Federal Reserve Board for authority to invest in the stock or corporations engaged principally in a foreign banking business to an amount not in excess of 10 per cent of the investing bank's capital and surplus. The McFadden Act (Feb. 25, 1927) for the first time authorized the establishment, subject to various restrictions, of *de novo* home city branches by national banks. The same act also limited somewhat the power of state member banks in certain states to establish new branch offices. These provisions relating to domestic branch banking, as well as certain later amendments, are of considerable interest and importance and will be discussed in some detail in a later chapter.

The act of June 21, 1917, again reduced the reserves required to be maintained by member banks against both demand and time deposits and required total legal reserves to be kept in the form of deposits with the Federal Reserve banks. Table 6 shows the minimum reserves required after the amendment. Although this change was a war measure, no further alteration was made in member bank reserve requirements until after the great depression.

The amendment of June 21, 1917, also contained provisions permitting state member banks to withdraw from the Federal Reserve System upon six months' written notice to the Federal Reserve Board and permitting state bank members to retain their statutory rights as granted them under state law. Up to this time, state banks had shown little

TABLE 6

MEMBER BANK RESERVES UNDER THE FEDERAL RESERVE ACT AS AMENDED

<i>Class of Bank</i>	<i>Per cent of deposits required to be held</i>	
	<i>Against demand deposits</i>	<i>Against time deposits</i>
Central reserve city..	13	3
Reserve city.....	10	3
All other.....	7	3

inclination to join the system, but this amendment assuring them the right to withdraw from the system if they so desired and the right to retain their statutory rights under state law, together with the war emergency, was effective in drawing most of the larger state banks and some smaller ones into the system.

Emergency and reform legislation.—The exigencies of the banks during the great depression, leading to a banking crisis that culminated in March 1933, resulted in certain emergency acts, the most important of which were the Reconstruction Finance Corporation Act of January 22, 1932, the Glass-Steagall Act of February 27, 1932, the Home Loan Bank Act of July 22, 1932, and the Emergency Banking Act of March 9, 1933. These emergency measures were followed by comprehensive reform legislation contained in the Banking Act of 1933 and the Banking Act of 1935. Some other less far-reaching legislation was enacted during and immediately following World War II. Some of the latter was temporary, some permanent.

It does not seem desirable to trace in detail all the multifarious provisions of these various laws. The provisions of some were, as noted, temporary and have lapsed. Other provisions, which were originally intended to be permanent, have been dropped or rather drastically altered by subse-

quent legislation. To avoid confusion, therefore, we shall close this chapter with a brief description of the banking system in 1930 and, in the following chapter, consider the present banking system.

THE BANKING SYSTEM IN 1930

Growth of the Federal Reserve System.—The development of the Federal Reserve system up to the time of the depression is shown by Table 7, which gives the loans and investments and the deposits of member banks and of all banks in the United States in June of each year from 1914 to 1930.

TABLE 7

LOANS AND INVESTMENTS AND DEPOSITS OF MEMBER BANKS
AND ALL BANKS IN THE UNITED STATES
(In millions of dollars)

Date: June	Loans and investments			Deposits		
	Members (1)	All banks (2)	Per cent of (1) to (2)	Members (1)	All banks (2)	Per cent of (1) to (2)
1914	8,313	20,789	40	6,374	18,566	34
1915	8,764	21,466	41	6,678	19,131	35
1916	10,315	24,587	42	8,395	22,759	37
1917	12,453	28,287	44	10,301	26,352	39
1918	18,507	31,813	58	15,670	28,765	54
1919	22,242	36,570	61	19,171	33,603	57
1920	25,559	41,685	61	21,915	37,721	58
1921	24,121	39,999	60	20,637	35,742	58
1922	24,182	39,956	61	22,397	37,615	60
1923	26,507	43,738	61	23,871	40,688	59
1924	27,167	45,180	60	25,711	43,405	59
1925	29,518	48,830	60	28,440	47,612	60
1926	31,184	51,562	60	29,781	49,733	60
1927	32,756	53,750	61	31,269	51,662	61
1928	35,061	57,265	61	32,133	53,398	60
1929	35,711	58,474	61	32,284	53,852	60
1930	35,656	58,108	61	33,690	54,954	61

Source: Annual Report of the Federal Reserve Board 1930, pp. 89-90.

The percentages in the third and sixth columns of the table are significant. They show that, relatively to the totals for all banks, member bank loans and investments and member bank deposits increased fairly regularly and rapidly up to 1919, but that after that year they formed a nearly constant percentage of the totals for all banks in the country.

Meanwhile, the combined resources of the twelve Federal Reserve banks increased from \$381,456,000 on June 25, 1915, to \$5,202,597,000 at the close of the year 1930; and the Reserve banks greatly extended their operations and

TABLE 8
VOLUME OF OPERATIONS IN PRINCIPAL DEPARTMENTS

	1927	1928	1929	1930
<i>Number of Pieces Handled</i>				
Bills discounted:				
Applications	97,000	123,000	145,000	99,000
Notes discounted	371,000	443,000	526,000	415,000
Bills purchased in open market for own account	254,000	251,000	196,000	208,000
Currency received and counted	2,194,608,000	2,270,555,000	2,427,330,000	2,441,989,000
Coin received and counted	2,691,184,000	2,929,091,000	3,239,709,000	3,325,555,000
Checks handled	862,275,000	887,997,000	924,449,000	904,975,000
Collection items handled:				
United States Government coupons paid ..	37,045,000	28,765,000	20,935,000	19,362,000
All other	5,909,000	6,461,000	6,504,000	6,388,000
United States securities — issues, redemptions, and exchanges by fiscal agency department ..	7,201,000	6,682,000	1,833,000	1,417,000
Transfers of funds	1,830,000	2,011,000	2,139,000	1,868,000
<i>Amounts Handled</i>				
Bills discounted	\$31,934,607,000	\$62,412,961,000	\$60,747,124,000	\$14,067,117,000
Bills purchased in open market for own account	4,050,867,000	4,240,669,000	3,587,478,000	3,873,698,000
Currency received and counted	12,939,578,000	13,315,551,000	14,782,429,000	14,262,809,000
Coin received and counted	7 432,131,000	7 451,125,000	7 478,219,000	537,534,000
Checks handled	278,399,627,000	301,703,814,000	367,215,123,000	324,883,021,000
Collection items handled:				
United States Government coupons paid ..	553,703,000	543,373,000	535,612,000	499,111,000
All other	6,710,317,000	7,414,440,000	7,185,384,000	7,528,014,000
United States securities — issues, redemptions, and exchanges by fiscal agency department ..	10,803,043,000	9,002,383,000	7,018,844,000	7,245,189,000
Transfers of funds	136,383,899,000	148,749,027,000	170,789,669,000	198,880,880,000

Revised.

sphere of influence in the interval. It is not desirable to consider the various phases of development of the Federal Reserve system at this point. A picture of the volume of operations of the Reserve banks since 1927, however, is presented in Table 8 from the report of the Federal Reserve Board for 1930.

Individual banks.—Among the individual banks of the system the most marked tendencies were in the direction of further departmentalization within individual institutions and a persistent concentration of banking resources through amalgamations and consolidations. The continued development of the "department-store" type of banking institution was stimulated by the federal legislation previously noted, which made it possible for national banks to perform other than commercial banking functions.

The consolidation movement, which was perhaps the most important development in the period since the establishment of the Federal Reserve system, came about in response to a similar movement in business. The number of banks in the United States and possessions was reduced from 27,062 in June 1915 to 24,079 in June 1930, while total resources increased from 27.8 billion to 74.0 billion dollars in the same interval. Actually the movement had gone farther than the figures indicate because of a fairly wide growth of chain and group banking in the period in question. The whole question is one of outstanding importance and will be treated in detail at a later point.

During the decade 1921-1930, there also occurred an unprecedented series of bank failures. This phenomenon, in a generally prosperous period of American life, was so extraordinary that it will be considered in detail, along with the consolidation and branch banking movements, in a later chapter.

Conclusion.—In this chapter the legislative framework of the Federal Reserve System has been described and its legislative and administrative development up to the beginning of the great depression has been outlined. In the following chapter we shall consider the existing banking system, which has resulted not only from the legislation outlined in this chapter, but also from a considerable mass of later amendatory acts. Under the circumstances, some considerable portion of the next chapter will repeat material already presented in this one. This is bound to be the case, since many of the legal provisions of the original Act and the predepression amendments are still in force. Any drawbacks that may attach to such repetition will, however, be

more than offset by the advantage of presenting, in one chapter, a bird's-eye view of the banking system as it operates under existing statutory powers and restrictions.

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PART III
THE BANKING PROCESS IN THE
UNITED STATES

CHAPTER 10

THE BANKING SYSTEM IN THE UNITED STATES

Introduction.—The development of the banking system in the United States up to the beginning of the great depression has been traced in previous chapters. Since 1930, two major pieces of banking legislation—the Banking Acts of 1933 and 1935—together with certain minor amendments to the banking laws, have resulted in certain major changes in the banking system. The purpose of the present chapter is to present a bird's-eye view of the banking system as it operates today in the light of the many changes that have occurred since the passage of the original Federal Reserve Act in 1913. Only such changes resulting from amendatory legislation as remain in force will be considered in the present connection. In this way, considerable confusion will be avoided.¹

THE FEDERAL RESERVE SYSTEM

Federal Reserve districts.—Under the Federal Reserve Act the United States is divided into twelve districts or regions known as Federal Reserve districts. Each district has a Federal Reserve bank, which acts as a central bank for the member banks of the district. Federal Reserve banks are located in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco, and these cities are known as Federal Reserve cities. All the Reserve banks except Boston and Philadelphia have one or more branches, and the cities in which these branch offices are located are known as Federal Reserve branch cities. Federal Reserve cities, Federal Reserve branch cities, district boundaries, and the

¹ For those interested in the changes that have been made in the Federal Reserve Act since its passage see *Digest of Rulings of the Board of Governors of the Federal Reserve System to October 1, 1937*, pp. 315 ff. Also see *The Federal Reserve Act as Amended to November 1, 1946*, for changes subsequent to 1937.

number assigned to each district are indicated on the accompanying map of the Federal Reserve System.

Federal Reserve banks.—The more important provisions of the Federal Reserve Act governing the organization and powers of the Federal Reserve banks will be considered under the headings (1) capital, surplus, and earnings; (2) management; (3) powers and functions; (4) note issues; and (5) relations with the government.

Capital, surplus, and earnings.—The Federal Reserve Act requires a minimum subscribed capital of \$4,000,000 for each Federal Reserve bank. The capital stock of the Federal Reserve banks is subscribed to by member banks in the amount of 6 per cent of the member banks' unimpaired capital and surplus. Only half of the subscribed stock has been paid in, the other half remaining subject to call by the Board of Governors of the Federal Reserve System. On April 23, 1947, the paid-in capital of the Federal Reserve banks ranged from \$4,194,000 at Minneapolis to \$67,247,000 at the Federal Reserve Bank of New York.

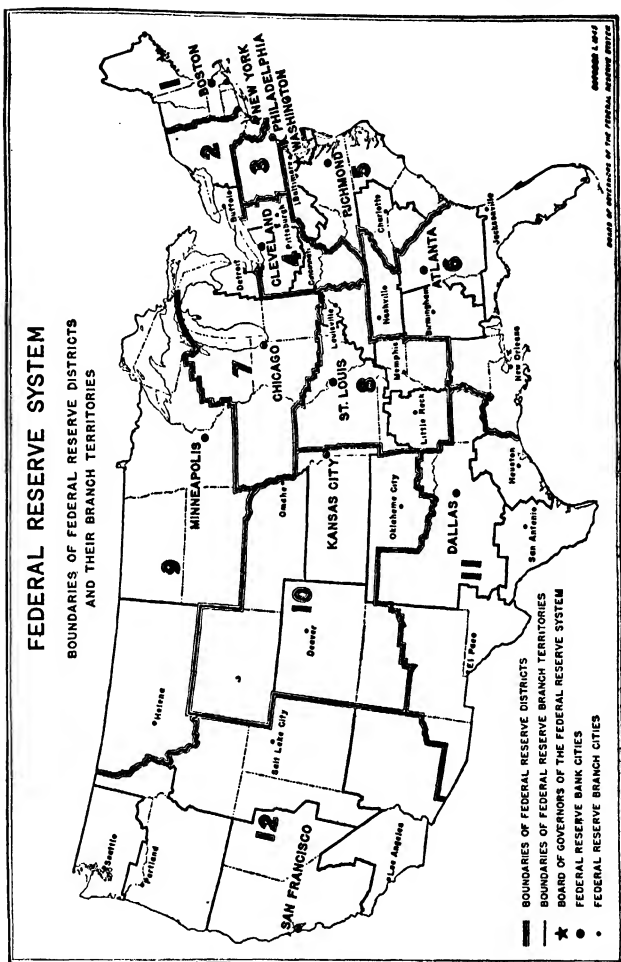
With regard to surplus and earnings, the Federal Reserve Act, as amended, reads, "After all necessary expenses of a Federal Reserve bank shall have been paid or provided for, the stockholders shall be entitled to receive an annual dividend of 6 per centum on the paid-in capital stock, which dividend shall be cumulative. After the aforesaid dividend claims have been fully met, the net earnings shall be paid into the surplus fund of the Federal Reserve bank."²

On April 24, 1947, the Board of Governors of the Federal Reserve System announced that it would use its power to levy interest on that portion of Federal Reserve notes outstanding not secured by gold certificates, as granted by Section 16 of the Federal Reserve Act, to transfer 90 per cent of Reserve bank earnings in excess of the 6 per cent dividend to the Treasury of the United States in 1947. The amount thus to be transferred in 1947 was estimated at some \$60,000,000.

The strict legality of such action by the Board of Governors seems distinctly doubtful. It is true that Section 16 gives the Board the right to levy an interest charge on a

² *Federal Reserve Act*, Sec. 7, par. 1.

FIG. 10



Source: Annual Report of the Board of Governors of the Federal Reserve System, 1946, p. 132.

portion of Federal Reserve notes outstanding. It is also true that Section 16 does not specify the use to which the Board shall put the amount received from such a charge. But, if the Board can properly decide to turn such funds over to the Treasury, it could, with equal propriety, decide to do anything else it might wish with such receipts. It seems clear that Congress did not intend that the Board should have any such power. Action should be taken by Congress to designate specifically the use to which funds received by the Board from an interest charge on Federal Reserve notes should be put.³

Management.—The management of each Federal Reserve bank is vested in a board of nine directors. Three directors are designated Class A, three Class B, and three Class C. Class A directors represent the member banks, Class B directors represent commerce, agriculture, and industry, and Class C directors represent the public. Class A and Class B directors are elected by the member banks and Class C directors are appointed by the Board of Governors of the Federal Reserve System. One Class C director is designated chairman of the board of directors and Federal Reserve agent, while another is designated as deputy chairman and deputy Federal Reserve agent.

In electing Class A and Class B directors, member banks are divided into three groups—small, medium-sized and large—the banks of each group electing one Class A and one Class B director by preferential ballot. Directors are elected for a term of three years, the term of one director of each class to expire annually.

The board of directors of each Federal Reserve bank is empowered to appoint a president, vice presidents, and such other officers and employees as are not otherwise provided for in the Act. The president, who is the chief executive officer of the bank, and the first vice president are appointed by the board of directors for terms of five years, subject to the approval of the Board of Governors.

Branch banks may be established by any Federal Reserve

³ For a good case against this action by the Board of Governors, see W. E. Spahr, "Federal Reserve Board Out of Bounds Again," *The Commercial and Financial Chronicle*, Thursday, June 19, 1947.

bank by permission from or on the order of the Board of Governors. Such branches are operated under the supervision of a board of not more than seven nor less than three directors. A majority of one of these directors is appointed by the parent Federal Reserve bank, the remaining directors by the Board of Governors and all branch directors hold office during the pleasure of the latter Board.

Powers and functions.—Any Federal Reserve bank may receive on deposit from member banks, nonmember clearing banks and from the United States, lawful money, bank notes, or checks and drafts payable at sight, and also, for collection, maturing notes and bills. A Federal Reserve bank may also receive, solely for purposes of collection, similar items from other Federal Reserve banks.

Federal Reserve banks may discount for member banks notes, drafts and bills of exchange arising out of actual commercial or industrial transactions, having a maturity at the time of discount of not more than ninety days. Agricultural paper may be discounted for member banks with a maturity of not more than nine months. Federal Reserve banks may also make advances to member banks, up to fifteen days' maturity when secured by government obligations and up to ninety days' maturity when secured by eligible paper or government obligations. Customers' notes held by member banks and secured by government obligations are eligible for discount under the same terms as commercial or industrial paper. Finally, in the event of an emergency, Federal Reserve banks may discount member banks' own notes secured by any sound assets at a rate of discount $\frac{1}{2}$ of 1 per cent above the rate on eligible paper and with a maximum maturity of four months.

Although the bulk of the Federal Reserve banks' lending operations is confined to member banks, paper of individuals, partnerships, or corporations secured by government obligations with a maturity not exceeding ninety days may be discounted by the Reserve banks at rates fixed by them and approved by the Board of Governors.⁴ The Federal Reserve

⁴ In the summer of 1947, rates on this type of discount were 2 per cent at nine Reserve banks and $2\frac{1}{2}$ per cent at the remaining three banks, as compared with a uniform rate of 1 per cent on eligible paper.

banks are also permitted to make a limited amount of direct loans to industry, with maturities up to five years, for working capital purposes.

In addition to their lending powers, Federal Reserve banks are permitted open market operations of specified sorts. They may buy and sell in the open market cable transfers, bankers' acceptances, and bills of exchange of the type made eligible for discount. They are authorized to deal in gold coin or bullion at home or abroad, to make loans thereon, to exchange Federal Reserve notes for gold, and to contract loans of gold coin or bullion, giving suitable security therefor. They are further empowered to buy and sell, at home or abroad, direct and fully guaranteed obligations of the United States, and certain warrants, bills, notes, and revenue bonds of political subdivisions, the latter to have a maturity of not more than six months, as well as acceptances of Federal Intermediate Credit Banks and National Agricultural Credit Corporations if permitted by the Board of Governors.⁵

Federal Reserve banks may open accounts in foreign countries, appoint foreign correspondents, and establish agencies in foreign countries. This business, as well as all conferences with foreign bankers is under the strict supervision of the Board of Governors.

Federal Reserve banks are authorized to fix rates of discount for various classes of paper, but such rates are to be determined with a view to accommodating commerce and business and are subject to the review and determination of the Board of Governors.

The Board of Governors of the Federal Reserve System, in accordance with the terms of the Federal Reserve Act, has designated each Federal Reserve bank as a clearing house for the member and nonmember clearing banks of its district and has established an agency in Washington, known as the Interdistrict Settlement Fund, for the clearing of claims among the several Federal Reserve banks and their branches.

Note issues.—Federal Reserve banks are authorized to issue bank notes, known as Federal Reserve notes, through

⁵ Details regarding lending and open market operations of the Federal Reserve banks will be found in Chapter 16.

their Federal Reserve agents and at the discretion of the Board of Governors. A Federal Reserve bank, wishing to procure these notes, makes application to its Federal Reserve agent for the amount of notes desired, the application being accompanied by the tender of collateral security equal in amount to the sum of the notes applied for. Permissible collateral security consists of gold certificates, discounted eligible paper, and direct obligations of the United States. Such gold certificates as are deposited with the agent as security may also count as reserve against Federal Reserve notes as required by the Act. The Board of Governors may call upon any Reserve bank at any time for additional collateral security to protect the notes issued to it.

Federal Reserve notes are obligations of the United States and are redeemable in lawful money at any Federal Reserve bank or at the Treasury in Washington. The Act makes these notes receivable at par by all national and member banks and Federal Reserve banks and for all customs, taxes, and other public dues. A Federal Reserve bank redeeming or receiving on deposit the notes of another Reserve bank is not allowed to pay out such notes under penalty of a 10 per cent tax, but is directed to return such notes to the issuing bank for payment.

Each Federal Reserve bank is required to maintain a reserve in gold certificates of not less than 25 per cent of its Federal Reserve notes in circulation and 25 per cent of its deposits. A part of the reserve against notes, equal to not less than 5 per cent of the notes in circulation, is held with the Treasury Department for the redemption of notes issued to the Reserve banks, but such redemption fund may be counted as part of the required 25 per cent reserve.

A Federal Reserve bank may reduce its liability for outstanding notes by depositing with the Federal Reserve agent its own notes, gold certificates, or lawful money of the United States. When gold certificates or lawful money are deposited with the agent, the notes no longer constitute a liability of the issuing Reserve bank, although they may remain in circulation for a time until presented for redemption out of the funds deposited with the agent.

The original Federal Reserve Act provided for the issu-

ance of Federal Reserve bank notes as a means of gradually retiring national bank notes. These provisions still remain on the books, although no longer effective since national bank notes have been in the process of retirement since 1935 as a result of the retirement of the government bonds that were required as their security.

Relations with the Government.—Section 15 of the Federal Reserve Act provides that “the moneys held in the general fund of the Treasury, except the five per centum fund for the redemption of outstanding national bank notes and the funds provided in this Act for the redemption of Federal Reserve notes may, upon the discretion of the Secretary of the Treasury, be deposited in Federal Reserve banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States; and the revenues of the Government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits.”

In addition to acting as depositories and fiscal agents for the government, the Federal Reserve banks are authorized to act in similar capacities for the Federal Intermediate Credit Banks or any National Agricultural Credit Corporation, for the Reconstruction Finance Corporation and other government-owned corporations, and for the International Monetary Fund.

In the course of World Wars I and II, these functions of the Reserve banks have assumed a high degree of importance.

The Board of Governors of the Federal Reserve System.⁶—For the purpose of co-ordinating the major policies of the twelve Federal Reserve banks and of securing a considerable measure of centralization in a regional central banking system, the Federal Reserve Act provides for a Board of Governors consisting of seven members. The mem-

⁶ The Banking Act of 1935, unfortunately for all writers on American banking, changed the name of the central board in Washington from “The Federal Reserve Board” to the unwieldy title of “The Board of Governors of the Federal Reserve System.” For the sake of simplicity, this body will be referred to as “the Board of Governors” or, occasionally, “the Board,” the remainder of the full title being understood.

bers of the Board are appointed by the President of the United States, by and with the advice and consent of the Senate. Not more than one of the seven members shall be appointed from any one Federal Reserve district, and the President is directed to have due regard to a fair representation of the different commercial, industrial, and geographical divisions of the country in making his selections.

Members of the Board are so appointed that the term of office of one member expires every two years. The initial appointments were made, one for two years, one for four, one for six, and so on up to fourteen years. An initial appointee who was appointed for a term of less than fourteen years might be reappointed, but no member of the Board is permitted to serve for more than one full term of fourteen years. Salaries of Board members are fixed at \$15,000 per year, together with actually necessary traveling expenses.

In appointing the members of the Board, one is designated by the President as chairman and one as vice chairman, these two members to serve in this capacity for four years. The chairman of the Board, subject to its supervision, is its active executive officer. The offices of the Board are located in Washington, D. C.

Powers and functions.—The Board of Governors, being the central coordinating body of the Federal Reserve System, is endowed with ample powers to perform its desired functions. These functions are, first, to direct and coordinate the banking and credit policies of the Federal Reserve banks concerning the banking and credit system as a whole, and, second, to act as a supervisory agency over the Federal Reserve banks and insure the soundness of their operations.

To enable the Board effectively to perform the first of these functions, it is given the power:

(a) To review and determine the rates of discount as established from time to time by the Federal Reserve banks;

(b) To have the right to determine or define the character of the paper that is eligible for discount within the meaning of the Act;

(c) To fix from time to time the percentage of member bank capital and surplus that may be represented by loans secured by stock and bond collateral of such banks;

(d) To fix from time to time margin requirements on loans secured by stocks and bonds for the purpose of carrying or trading in listed securities (Securities Exchange Act, Sec. 7);

(e) To regulate, at its discretion, the issuance of Federal Reserve notes to the Federal Reserve banks;

(f) To permit or require Federal Reserve banks to rediscount the discounted paper of other Federal Reserve banks at rates of discount or interest to be fixed by the Board;

(g) To suspend for a period of thirty days, and to renew such suspension for periods not exceeding fifteen days, any reserve requirement specified in the Act, upon the payment of a graduated tax upon the deficiency in reserves;

(h) To fix from time to time, within specified limits, the reserve requirements of member banks against their deposits.

To permit the performance of the second function mentioned above, the Act gives the Board of Governors the power:

(a) To examine the accounts, books, and affairs of each Federal Reserve bank and to require statements and reports of condition. Weekly statements of condition (individual and consolidated) of the Reserve banks are required to be published by the Board;

(b) To suspend or remove any officer or director of any Federal Reserve bank for due cause;

(c) To require the writing off of doubtful or worthless assets by the Reserve banks;

(d) To suspend the operations of any Federal Reserve bank for violation of any of the provisions of the Act, and, if deemed desirable, to liquidate or reorganize such bank;

(e) To require bonds of Federal Reserve agents, and to make regulations for safeguarding money or property of any kind deposited in the hands of such agents;

(f) To exercise general supervision over the Federal Reserve banks.

The Board of Governors is thus substantially equipped both to control the credit policy of the system as a whole and to insure the sound operation of the several Federal Reserve banks.

The Federal Open Market Committee.—Because of the importance of the open market operations of the Federal Reserve banks, the Act provides a special committee to have control over these operations. This committee, which is designated the Federal Open Market Committee, is composed of the seven members of the Board of Governors plus five members elected by the boards of directors of the

Federal Reserve banks, the latter five members to be elected annually.

The five representatives of the Reserve banks must be presidents or first vice presidents and are selected as follows: one by the Federal Reserve Bank of New York, one by the Boston, Philadelphia, and Richmond banks, one by the Cleveland and Chicago banks, one by the Atlanta, Dallas, and St. Louis banks, and one by the Minneapolis, Kansas City, and San Francisco banks. Five alternates are also elected to serve in the absence of the regular representatives, and they must also be Reserve bank presidents or first vice presidents.

The Committee meets in Washington at least four times a year and its decisions are binding on all the Federal Reserve banks. The time, character, and volume of all purchases and sales directed by the Committee "shall be governed with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country."

The Federal Advisory Council.—As a link between the Federal Reserve banks and their members on the one hand and the Board of Governors on the other, the Act provides for a Federal Advisory Council, to consist of one member from each Federal Reserve district. Members of the Council are elected annually by the boards of directors of the Federal Reserve banks, each member receiving such compensation, subject to the approval of the Board of Governors, as the board of directors of the Federal Reserve bank selecting him may determine.

The Federal Advisory Council is directed to meet in Washington, D. C., at least four times annually at the call of the Board of Governors. The Council may arrange additional meetings, in Washington or elsewhere, if deemed necessary. The powers of the Council are (1) to confer with the Board of Governors on general business conditions, (2) to make representations concerning matters within the jurisdiction of the Board of Governors, and (3) to obtain information and make recommendations concerning matters of banking and credit policy in the various Federal Reserve districts or in the system as a whole.

MEMBER BANKS

National and state bank members.—The Federal Reserve Act requires all national banks to be members of the Federal Reserve System. State banks, while not required to become members of the system, may do so upon meeting the requirements of the Federal Reserve Act concerning minimum capital, reserve requirements, and certain other matters. State banks that join the system may withdraw from membership upon six months' notice. They may also retain the statutory rights and privileges conferred on them by state law unless specifically denied by the Federal Reserve Act. Thus, capital and reserve requirements are fixed by the Act, but limitations on loans to one borrower, real estate loans, branch banking, etc., are fixed by the law of the state in which the state bank is incorporated.

As of the close of 1946, there were 5007 national banks and 1893 state bank members (including 3 mutual savings bank members), while the number of nonmember banks was 7147. The number of nonmember banks thus exceeded the number of members by 247. A comparison of earning assets (loans and investments) and deposits of member and nonmember banks, however, indicates the comparative unimportance of nonmember banks in the banking system.

On December 31, 1946, loans and investments of all banks stood at \$131.7 billion. The corresponding figure for member banks was \$96.4 billion. Deposits on the same date amounted to \$155.9 billion for all banks and \$118.2 for member banks. These figures indicate that over 73 per cent of all loans and investments and nearly 76 per cent of all deposits were held by member banks. Leaving mutual savings banks out of account, nonmember commercial banks held only approximately 15 per cent of loans and investments and deposits of all commercial banks. It is clear from these comparisons that nonmember banks, although fairly numerous, do not play a significant part in the commercial banking system of the United States. Attention will accordingly be concentrated on member banks of the Federal Reserve System.

Nature of business.—Although, with the exception of the mutual savings banks, most of the deposit banking institutions in the United States are referred to as commercial banks, they are actually departmentalized banks carrying on a variety of financial functions. Thus, nearly all of the so-called commercial banks have savings departments and many of them carry on a safety deposit business and a trust business. The larger banks frequently also have investment departments, employing investment analysts to give advice to bank customers and to advise the bank on its own investments. Recently there has also been a rather extensive development of consumer lending on the part of the commercial banks and separate personal loan departments have been established by many institutions to handle this type of business.

There is no particular objection to this "department store" type of bank if the business of the various departments is segregated. In some states, notably California, the state banking law requires the segregation of assets, books and accounts, and capital of the various banking departments, but the National Bank Act does not include such a requirement except in the case of trust business. Such segregation of business as exists among these institutions must be done by the bank's management if it so desires. An addition to the National Bank Act requiring the segregation of assets of all departments of national banks would be highly desirable.

The remainder of this section will be devoted to a brief consideration of the legislation governing the operation of member banks of the Federal Reserve System. We shall consider legislation applying to, first, the sources of bank funds, capital, and deposits, and second, the uses to which these funds are put, namely, loans, investments, and reserves.

Capital accounts.—The National Bank Act provides that national banks shall be organized with a minimum subscribed capital stock of \$100,000, except that national banks may be organized in places of less than 6,000 inhabitants with a minimum capital of \$50,000. For places of more than 50,000 inhabitants, the minimum requirement is \$200,000.

Again an exception is made in that, if state banks may be established in the outlying districts of such cities with a capital of \$100,000 or less, the Comptroller of the Currency may permit the establishment of national banks in such outlying districts with a minimum capital of \$100,000.

National banks are also required to begin business with a paid-in surplus equal to 20 per cent of the par value of the capital stock and are required to carry 10 per cent of their net earnings to surplus, until the surplus account shall equal the capital stock.

Capital requirements for state member banks are the same as for national banks, with two minor exceptions. Prior to June 16, 1933, the date of approval of the Banking Act of 1933, national banks might be established in places of less than 3,000 inhabitants with a minimum capital of \$25,000. The national bank capital requirements noted above did not apply to these smaller banks that were already in operation on June 16, 1933. The law therefore permits state banks in places of less than 3,000 inhabitants, which were already in operation on the foregoing date, to come into the Federal Reserve System with a capital of not less than \$25,000. Also any insured state bank so situated, which increases its capital to \$25,000, is eligible for membership.

The Banking Act of 1935 provided that state member banks with a surplus of less than 20 per cent of capital should carry one-half of net earnings to surplus until the surplus account amounted to 20 per cent of capital.

Capital requirements for banks with branches are somewhat higher than for unit banks. The minimum capital required for a bank with branches is \$500,000, with the exceptions that in states with less than 1,000,000 population and no cities larger than 100,000, the minimum is \$250,000, and that in states with less than 500,000 population and no cities larger than 50,000, the minimum is \$100,000. However, the aggregate capital of a bank and its branches may at no time be less than the aggregate minimum capital required for an equal number of unit banks situated in the various places where the bank and its branches are situated.

Minimum capital requirements as applied to member banks of the Federal Reserve System are better than they

were prior to 1933 and may be deemed reasonably satisfactory. Theoretically, a bank's capital funds should be related to the amount of its deposits, rather than to the size of the town or city in which the bank is located. One of the Senate drafts of the Banking Act of 1933 included a provision requiring national banks to maintain capital funds of not less than 15 per cent of average deposits, but this provision was eliminated in the final draft that became law.

Actually, the proportion of capital accounts to total assets and liabilities of member banks is very low, being 6.1 per cent for national banks and 6.9 per cent for state member banks on December 31, 1946. As related to deposits, the percentages were 6.5 and 7.6 for national and state member banks respectively. A somewhat larger percentage ratio of capital funds to deposits would be desirable.

Deposits.—The deposits of member banks are classified by the Federal Reserve Act (Sec. 19,1) as "demand deposits," "gross demand deposits," "deposits payable on demand," "time deposits," "savings deposits," and "trust funds," and the Board of Governors is authorized to define these terms for the purposes of determining reserve requirements, the payment of interest on deposits, and so forth.⁷

Member banks are required to maintain certain reserves against their deposit liabilities. They are also prohibited from paying interest on demand deposits. Although interest may be paid on time and savings deposits, the maximum rate that may be paid on different classes of such deposits and in various sections of the country is fixed by the Board of Governors.

Deposit insurance.—As the result of a long series of bank failures, the Banking Act of 1933 provided for the establishment of a Federal Deposit Insurance Corporation the purpose of which was partially to insure bank depositors against the loss of their funds resulting from bank failures. All member banks must belong to the group of insured banks. Nonmember banks are not required to become insured, but, at the close of 1946, 6457 nonmember commercial banks

⁷ The definitions of the Board of Governors in this connection will be considered in some detail later. See Chapter 12.

were insured as compared with 690 that were uninsured.

The deposit insurance provisions of the Federal Reserve Act (Section 12B) as amended provide for the insurance of each depositor of an insured bank up to \$5,000 in the event of the bank's failure. Insurance in this amount covers in full approximately 98 per cent of the number of bank depositors. The bulk of the funds available to the Federal Deposit Insurance Corporation come from the payment by insured banks of an annual assessment or premium equal to $\frac{1}{12}$ of 1 per cent of their deposits. Since its organization, the F. D. I. C. has been efficiently operated, the total number of bank failures having been 335, of which 219 were non-member insured banks and 88 nonmember uninsured banks. One bank failure was reported in 1944 and none since then.

Collection of checks.—The bulk of the funds deposited in the banks is in the form of checks and drafts, a large majority of which are drawn on other banks. The latter have to be collected before the funds are available for lending and investment.

Checks drawn on banks in the same city are collected periodically, usually daily, through the local clearing house. In the case of out-of-town checks, member banks may make use of the Federal Reserve collection system. Checks are sent to the Federal Reserve bank and, when collected, the sending bank receives a credit to its reserve account.⁸ Non-member banks, and some members, send their out-of-town checks to correspondent banks for collection, but since the correspondent is practically always a member bank, the checks are finally collected through the Federal Reserve collection system.

Reserves.—Member banks of the Federal Reserve System are required to keep certain specified reserves against their demand and time deposits. Under the national banking system, national banks were classified, for reserve purposes, into central reserve city banks, reserve city banks, and all other (or country) banks. This classification has been retained under the Federal Reserve System, although the

⁸ The collection of checks under the Federal Reserve collection system is described in detail in Chapter 12.

amount and composition of legal reserves has been markedly changed.

At present, all legal or required reserves of member banks must be held in the form of deposit accounts with the Federal Reserve banks. Member banks in central reserve cities (New York and Chicago) are required to keep a basic reserve of 13 per cent of net demand deposits and 3 per cent of time deposits. For member banks in reserve cities, the corresponding requirements are 10 per cent and 3 per cent, and for country member banks they are 7 per cent and 3 per cent.

However, under the Federal Reserve Act, as amended, the Board of Governors may raise these requirements by any amount up to 100 per cent, or, if they have been so raised, may lower them, but they may not be lowered below the basic requirements specified in the preceding paragraph. The Board also has the power to alter reserve requirements, within these limits, for one class of banks or one type of deposit without reference to the other classes of banks or deposits.

Since it has been given the right to change reserve requirements, the Board of Governors has done so a number of times. In September 1949, the requirements stood as follows:

	<i>Against net demand deposits</i>	<i>Against time deposits</i>
Central reserve city banks	22	5
Reserve city banks	18	5
Country banks	12	5

In addition to these required reserves, member banks must hold, as a matter of necessity and convenience, a certain amount of cash in their vaults, to meet day-to-day demands for cash from customers, and a certain amount in demand balances with correspondent banks. These, together with required reserves, constitute what may be termed the working reserves of the banks. Thus, on December 31, 1946, member banks had cash in vault of \$1.6 billion and balances with domestic banks of \$5.9 billion in addition to their \$16 billion of reserves with the Federal Reserve banks.

Loans and investments.—Although the banks derive a certain amount of income from service and exchange charges, safety deposit box fees, and trust and miscellaneous fees, the bulk of their earnings is obtained from the income from loans and investments. The lending and investing of available funds is accordingly the bank's major function. It might therefore be expected that the law would attempt to regulate this function somewhat through legal limitations designed to protect the depositor against the improper utilization of his funds by the banker.

Loans.—The legal limitations on loans are not numerous. As regards national banks, the National Bank Act limits the amount of loans to one borrower to 10 per cent of the lending bank's capital and surplus. The purpose of this limitation is to require the banks to diversify their loans. Although the limit thus imposed is fairly stringent, there are numerous exceptions permitted. Thus obligations in the form of bills of exchange drawn against actually existing values, double-name business paper, and obligations secured by goods in process of shipment are subject to no limitation, while obligations secured by warehouse receipts and government bonds have higher than 10 per cent restrictions. National banks are also prohibited from making loans or discounts secured by their own stock.

Another limitation on lending by national banks applies to loans on real estate. The aggregate of real estate loans of a national bank is limited to the bank's capital and surplus or 60 per cent of its time and savings deposits, whichever is greater. Real estate loans with a five-year maturity are limited to 50 per cent of the value of the property, but amortized real estate loans of ten years maturity may be made up to 60 per cent of the value of the property, provided that the payments are sufficient to amortize 40 per cent of the principal in that period of time.

State member banks are subject to the law of the state of incorporation with regard to loan limitations and cannot here be considered in detail. Suffice it to say that practically all of the state banking laws limit the amount banks can lend to one borrower and also limit real estate loans in one way or another. The state statutes in these respects are, of

course, diverse and in some instances are less restrictive than the National Bank Act. They do, however, follow the same general pattern.

As noted earlier in the chapter, the Board of Governors has the power to fix the proportion of member bank capital and surplus that is represented by security loans,⁹ and, through its power to fix margin requirements, the Board exerts considerable control over the amount and type of member bank security loans.

The law also, with certain minor exceptions, prohibits member banks from making loans to their executive officers.

Investments.—With very limited exceptions (including stock of a Federal Reserve bank), national banks are prohibited from purchasing stock for their own accounts, but may so purchase investment securities. The National Bank Act defines "investment securities" as "marketable obligations evidencing indebtedness of any person, copartnership, association, or corporation in the form of bonds, notes and/or debentures commonly known as investment securities under such further definition of the term 'investment securities' as may by regulation be prescribed by the Comptroller of the Currency." The amount of investment securities of any one obligor is limited to 10 per cent of the investing bank's unimpaired capital and surplus. National banks are also prohibited from underwriting issues of securities. None of these limitations applies, however, to obligations of the United States, any state or political subdivision thereof, and certain federal corporations and agencies.

The investments, as in the case of loans of state member banks are regulated by the laws of the state in which they are incorporated. In some states, banks are allowed to invest in stocks and/or to engage in underwriting new security issues. State laws, on the whole, are somewhat more lenient than the National Bank Act regarding the investment activities of banks organized under them.

The whole problem of regulation of loans and investments by law is of somewhat questionable desirability. Take,

⁹ As far as the author can determine, no such limit has to date been fixed by the Board of Governors.

as an example, the 10 per cent (of capital and surplus) limitation of the National Bank Act, as applied to both loans and investments. The purpose of these limitations is to secure diversification, a wholly desirable aim. Yet it is conceivable that a bank might lose highly desirable business through such a limitation, being forced to turn down a working capital loan of high grade in favor of smaller, but less satisfactory, loans.¹⁰ To a lesser extent, the same objection applies to the limitation on investment securities, especially since the National Bank Act sets up no standards governing the desirability of the investment securities that may be purchased, but confines the limitation to the form of security and the amount of securities of one obligor that may be purchased.

Although moderate general limitations on lending and investment by banks may and should properly be imposed by law, the fact remains that the soundness of the banks' loans and investments, and hence the protection afforded depositors, must to a large extent rest on the judgment and ability of the banker in extending loans and making investments. The best way in which the law can help to secure the protection of depositors is through provision for a competent and thoroughgoing system of bank examinations that will reveal, and help to correct, weak spots in the lending or investment activity of certain banks.

Acceptances.—In addition to their lending and investment activities, member banks are permitted, under the Federal Reserve Act, to accept bills of exchange that have been drawn for certain specified purposes. Thus member banks may accept drafts or bills that grow out of (1) the exportation or importation of goods, (2) the domestic shipment of goods secured by shipping documents, (3) the domestic or foreign storage of readily marketable staples secured by warehouse receipts, and (4) the creation of dollar exchange.

¹⁰ The Union Trust Company of Cleveland, Ohio, when organized in 1920 as a merger of six local banks, organized under a state instead of a national charter, in part because the Ohio law permitted loans to one borrower of 20 per cent of capital and surplus. This broader limitation would permit the Union Trust Company to meet the full line-of-credit needs of the larger Cleveland industries, which the narrower limitation of the National Bank Act would not.

Maturities of accepted bills must be not in excess of six months. Aggregate acceptances of any bank are limited to 50 per cent of the bank's capital and surplus, except that permission may be obtained from the Board of Governors to accept bills up to 100 per cent of capital and surplus, but not more than half of said 100 per cent may be domestic acceptances.

For a variety of reasons, discussed in a later chapter, the acceptance business has been of relatively small importance since 1930. Nevertheless, it was at one time of substantial significance, especially among the larger banks in port cities, and, with the heavy postwar foreign trade as an impetus, may well again attain substantial significance.

Miscellaneous functions.—It has been noted in an earlier paragraph that most of the banks of the country are of the departmental type, performing a variety of financial functions and services. Some of these, such as extending loans, making investments, and accepting bills, are strictly banking functions, either primary or incidental. Two types of business carried on by a majority of banks, the *trust* business and *safety deposit* business, are non-banking in nature, although conveniently carried on by the banks. Because of their non-banking nature, they are merely mentioned at this point, but will be given further consideration later.¹¹

Mutual savings banks.—In some parts of the country, especially in the northeastern section, mutual savings banks are an important type of specialized banking institution. Although mutual savings banks are eligible to membership in the Federal Reserve System, there is little reason for them to belong to the system and few have joined. At the end of 1946, there were 3 mutual savings banks that were members of the system and 538 that were not. Of the total of 541 mutual savings banks, 191 were members of the Federal Deposit Insurance Corporation and 350 were not. The 191 banks insured by the F.D.I.C. had, however, two-thirds of the earning assets and deposits of all mutual savings banks.

Loans and investments of all mutual savings banks amounted to \$17.7 billion, or 13.4 per cent of the figure

¹¹ These services, since they are widely performed by the banks of the country, are given more or less detailed treatment in a later chapter. See Chapter 36.

of \$131.7 billion dollars for all banks. These banks accordingly occupy an important place in the banking system as a whole. They carry on a highly specialized business, however, performing strictly savings bank functions, and hence have no place in a consideration of commercial banking operations.

General observations.—The banking system of the United States, as described in the foregoing pages, is largely a unit banking system. Branch banking, which is the general practice in most other countries has not reached a high state of development in this country. Although the 14,055 reporting commercial banks had 4,013 branches and additional offices on March 31, 1947, many of these were convenience branches located in the home city or contiguous suburban areas. The National Bank Act permits national banks to establish branches throughout the same territory permitted to state banks and trust companies by state law. The most extensive branch system possible under these circumstances is state-wide, and in California branch banking has developed to a high degree. A number of states permit only limited (city-wide or county-wide) branch banking, while a few deny branch banking privileges entirely.

Unless or until the National Bank Act is amended to permit wider branch banking powers to national banks, regardless of state laws on the subject, the development of branch banking in the United States will continue to be limited.

To some extent, laws restricting branch banking have been circumvented by group banking (the unified control of a group of banks through stock ownership), but the importance of this type of banking organization has decreased since the twenties. Accordingly, the banking system of the country is still largely a system of unit banking with little present indication of change.

Auxiliary institutions.—Among other institutions that should receive mention are Morris Plan banks and other personal loan companies, commercial credit and finance companies, industrial banks, building and loan associations, and a variety of agricultural loan institutions. Some of these institutions accept deposits while others rely for their funds on the commercial banks or the investment market.

Formerly, the bulk of personal loans was handled by specialized small loan companies, while the finance companies financed accounts receivables and installment paper for commercial and industrial concerns, borrowing funds from the commercial banks for this purpose. Since the middle thirties the commercial banks have entered the consumer loan and installment and other accounts receivable fields directly and hence now compete directly with the aforementioned institutions. The savings departments of the commercial banks also compete with building and loan associations in the extension of real estate loans and there is also some competition between commercial banks in agricultural areas and the various agricultural loan agencies.

Brokers and dealers.—As an adjunct to the operation of the commercial banking system various groups of brokers and dealers operate in one or another of the open markets. Among these may be mentioned the commercial paper houses, discount houses, and brokers operating on the New York stock exchange and other exchanges. Commercial paper houses buy working capital notes from business concerns of high credit standing and sell these notes to commercial banks that desire this type of paper as a source of investment of temporary surplus funds. The discount companies or houses act as dealers in the market for bankers' acceptances and handle government obligations as well. Stockbrokers act as agents for customers in the purchase of stocks or bonds listed on the stock exchanges and also borrow for their customers at the banks when the security purchases are partially made with borrowed funds.

Investment banking.—Investment banking is carried on by a group of investment banking houses, which discover, underwrite, and distribute issues of corporate and public securities. Prior to 1933, a considerable number of the larger commercial banks controlled, through stock ownership, investment banking companies. Because of certain abuses that had developed in this connection, the Banking Act of 1933 undertook to divorce investment banking from the commercial banks. Member banks are no longer permitted to operate investment banking subsidiaries, and houses engaged in

investment banking are not permitted to do a deposit banking business as was formerly sometimes done.

Conclusion.—The purpose of the present chapter has been to present a concise picture of the present banking system of the United States with chief emphasis on legal provisions affecting banking operations and with little or no elaboration or critical comment. The succeeding chapters in this part of the text will undertake a detailed consideration of the elements entering the banking process of the United States.

REFERENCES

The Federal Reserve Act as amended to November 1, 1946. (Board of Governors of the Federal Reserve System). Washington, 1946.

(Also see references following Chapter 9.)

CHAPTER 11

BANK NOTES

Introduction.—In the present chapter we shall consider one of the two types of credit money for which the banking system is responsible, namely, the bank note. After an introductory discussion of the nature of bank notes and the requirements of a satisfactory system of bank note issue, attention will be directed to the use of bank notes in the United States.

Bank notes a form of credit money.—A bank note is the formal promise of a bank to pay to the bearer on demand a certain designated sum in standard money or some form of government credit money. Upon the acceptance of a bank note, the recipient enters into a debtor-creditor relationship with the issuing bank, the bank becoming the debtor and the noteholder the creditor. The bank note is thus, legally, a form of credit instrument, but, from the point of view of monetary theory, the mere existence of this debtor-creditor relationship is of less significance than the economy in the use of government money that may, and usually does, result from the use of bank notes. If the system of note issue is satisfactory, bank notes will be readily accepted in exchange for goods and services, and seldom, if ever, will the issuing bank be confronted with the necessity of redeeming any large proportion of its note issues at any one time. In consequence, it is not necessary for the issuing bank to keep 100 per cent of its circulating notes in the form of government money for redemption purposes. Actually, the redemption reserve which must be maintained to insure safety is but a fraction of the notes in circulation, and an important economy of government money is thereby effected. In order that bank notes shall act satisfactorily in the performance of the monetary functions, however, it is necessary that the system of note issue shall comply with three definite re-

quirements: (1) the bank note issues must be kept at par with standard money; (2) they must be adequately secured; and (3) they must have elasticity of the proper sort. We shall now consider these three prime requisites of a satisfactory system of note issue in the order in which they have been named.

Parity.—It should be obvious that bank notes must be maintained at par with the standard money if they are not to disrupt the smooth working of the monetary system. Every dollar should be kept equal in value to every other dollar. If this is not done, the cheaper money will only circulate at a discount, with an attendant disruption of trade, or, if it has substantial legal tender powers, it will cause the more valuable money to disappear from circulation, if used to excess, and usurp the place of the standard.

The best way to maintain parity of bank notes with the standard money is to insure, through the maintenance of sufficient reserves, that the notes are convertible into the standard money at all times. If the country is large, a number of conveniently located redemption agencies is imperative to be sure that the notes are *readily* convertible in all sections of the country.

Other devices used to secure parity are to make the notes full legal tender, or to make them receivable at par by the government in payment of taxes and duties and/or by the banks of the system as deposits or in payments to them. These devices are sufficient to maintain parity without easy convertibility, but are dangerous if note issues are not kept within reasonable bounds. Even when such provisions prevail, however, it is best and safest to supplement them with provision for ready convertibility.

Security.—Because bank notes have much the same appearance as government paper credit money, or because the recipient unwittingly or of necessity becomes the creditor of a bank about which he knows little and has no chance to investigate, it has for many years been the practice of the government to provide special protection to bank noteholders. This protection may take the form of regulations designed to protect the noteholder, the requirement that the bank maintain specific security behind the notes it issues, or the

guarantee of the payment of the noteholder by the government in case the issuing bank should fail.

Regulations that have been used to protect noteholders indirectly are: (1) limiting the number of issuing banks (to the central bank or a given group of banks); (2) limiting the amount of notes to be issued; (3) limiting issues to notes of higher denominations; (4) restricting the territory in which the notes may circulate; (5) giving the noteholder a prior lien on the assets of a failed bank; and (6) providing for the establishment of a safety fund from which the noteholders of a failed bank will be paid.

Specific security is frequently required to be held behind bank note issues, often in conjunction with one or more of the foregoing regulations. The types of security most frequently required behind note issues consist of gold, government bonds, and/or commercial paper. When gold alone is permitted as security, the elasticity of the note issue is destroyed and the notes become, in effect, gold certificates.

Assuming the soundness of the government, a high degree of protection is accorded the noteholder when note issues are guaranteed by the government. When guaranteed note issues are secured and regulated as well, the protection afforded by the security and regulations is protection to the government, the noteholders' security being the guarantee of the government to pay the noteholder in the event that the issuing bank should fail.

Elasticity.—A third requisite of a satisfactory system of bank note issue is elasticity, i.e., the ability to expand and to contract to meet the legitimate needs of business for hand-to-hand money. Elasticity is important since it permits the ready and economical adjustment of hand-to-hand money to business needs without entailing either difficult readjustments in the amount of standard money or pressure on, and dislocation of, prices in certain parts of the system.

Expansibility.—If there were no legal restrictions on the issuance of notes by the banks, note issues would expand readily in accordance with business demands. Business men or farmers needing additional hand-to-hand money to meet a temporary or seasonal need would borrow at the banks,

take the proceeds of the loans in bank notes, and immediately put them into circulation.

If the power to issue notes is confined to a central bank, the procedure is the same, one step removed. Businessmen borrow at their banks, taking the proceeds of their loans in hand-to-hand money. The banks, finding their vault cash sharply drawn down as a result, will borrow at the central bank, taking the proceeds in central bank notes, in order to keep their vault cash at the desired level. Thus, in either case, it is the borrowing by businessmen and farmers that is responsible for the expansion of bank note issues.

The expansibility of bank note issues is, in practice, limited either by reserve requirements, or by security requirements, or by a combination of the two. Limitation of expansibility by reserve requirements is obvious. If banks are required to keep a 50 per cent reserve against notes in circulation, note issues may be expanded to two times the amount of reserve available. If the required reserve is only 25 per cent, on the other hand, note issues may be expanded to four times the amount of reserve available, while with a 10 per cent reserve requirement a ten-fold expansion of notes would be possible.

As to security requirements as a limiting factor, it is clear that, if the security the law requires to be held against bank notes is limited in amount, the expansibility of bank note issues will be limited accordingly. National bank notes, for example, had to be secured by certain specified issues of government bonds, and their expansibility was accordingly limited to the amount of such bonds available. It is in this connection that commercial paper is advantageous as security. The amount of commercial paper varies with business needs and, theoretically, there will always be ample security available when such paper is required as security for note issues.

Contractibility.—In the ordinary case, bank note issues, having expanded as a result of borrowing on the part of the bank's customers, will contract as these loans are repaid. Since the borrower is paying the bank interest on his loan, he is naturally anxious to retire it as soon as the need for the borrowed funds has passed in order to free himself of

this interest burden. As notes pile up in the tills of merchants and dealers in excess of current needs, they will be deposited in the bank or used to reduce indebtedness and will be retired. If a considerable number of banks issue notes, the law may hasten contraction of note issues by providing that notes received by banks, when not their own, must be returned to the issuing bank for redemption. Or, where a central bank issues the notes, if the member banks are not allowed to count these notes as reserves, their return to the central bank may be hastened.

It should be evident that the length of time bank notes remain in circulation will depend on the purposes for which they are paid out. A farmer borrowing notes from his bank to meet crop harvesting demands, will repay his loan out of proceeds of the sale of the crop, and the notes will shortly be retired. On the other hand, notes paid out to a borrower for investment purposes may remain in circulation for extended periods.

Emergency elasticity.—Before bringing this discussion to a close, perhaps a word should be included about emergency elasticity. If commercial paper is permitted as security for note issues, no special regulations permitting an expansion of notes sufficient to meet the emergency are necessary so far as the nature of the security is concerned.¹ If, however, a fairly high reserve is required by law to be kept against ordinary note issues, it may be desirable to provide for a relaxation of the legal reserve requirements for emergency purposes, with provision for the payment of a fine by any issuing bank whose reserve falls below the required minimum. When gold coin, or limited issues of government bonds, constitutes the normally required bank note security, any effective degree of emergency expansion will necessitate the relaxation of the security requirements of the ordinary law, and a fine or tax may then be imposed on all notes secured by other than the regularly specified collateral.

¹ This statement, while generally true, needs some qualification. A loss of confidence in the banks sufficient to cause heavy withdrawals of deposits for purposes of hoarding, if it occurs during a period of intense depression, may find the banks without sufficient commercial paper to put up as security for bank note issues. A practical example of such a situation was to be found in the United States in the closing months of 1931 and early 1932.

The fine or tax mentioned in both these cases is levied as an incentive to the issuing banks to make them retire their emergency issues rapidly as soon as the crisis is over. At a time of crisis, the banks of the system are more concerned with their own solvency than with the making of profits and are willing to pay a fairly heavy tax on excess note issues in order to prevent undesirable consequences both to themselves and to their customers. Such times, however, are abnormal. In ordinary times the banks will not issue excessive amounts of notes because of the tax. If a serious situation arises, they may resort to the issuance of emergency notes to tide over the difficulty, but the tax will make it to their own interests to contract these issues as rapidly as practicable.

With this introductory general statement, attention may be turned to the use of bank notes in the United States. The Federal Reserve Act contained provisions for the issuance of two types of bank notes with the purpose of remedying the objectionable features of the national banking system in respect to note issues. These two new types of notes were Federal Reserve bank notes and Federal Reserve notes. The former, being of little significance, will be given brief consideration first, after which attention will be turned to the more important type of issue, Federal Reserve notes.

FEDERAL RESERVE BANK NOTES

Reason for authorization.—The Federal Reserve Act provided a plan whereby a considerable proportion of the outstanding national bank notes might be permanently retired. After two years from the time of the passage of the act and for twenty years thereafter, national banks wishing to retire their circulation were empowered to sell their bond security for such notes to the Federal Reserve banks at par and accrued interest. The Federal Reserve banks, as a group, were compelled to purchase the bonds so offered up to a maximum of \$25,000,000 per year. The Reserve banks, having purchased such bonds, were then permitted to follow either of two courses. Either they could issue Federal Reserve bank notes, secured by the purchased bonds and identical in all respects² with the national bank notes that had been re-

² Except that there was no capital limitation on such issues by Reserve banks.

tired, or they could exchange the 2 per cent gold bonds that had been purchased from the national banks for one-year 3 per cent gold notes of the United States to the extent of one-half of such bonds, the other half being exchangeable for thirty-year 3 per cent gold bonds, neither the gold notes nor the bonds so obtained to have the circulation privilege.

The intention of this section of the Federal Reserve Act was evidently to provide a means of retiring the national bank notes without undue loss to the issuing banks. The price of the 2 per cents was artificially inflated by the demands of the national banks requiring them for bank note security, and any blanket removal of the circulation privilege from these bonds would have resulted in a precipitate drop in their market value with consequent heavy loss to the national institutions that held them. The provision for the sale of these bonds to the Federal Reserve banks at par, and the subsequent refunding of them into 3 per cent government obligations was, therefore, fully justified.

For two reasons, however, the provisions of this section were unsatisfactory. In the first place, they were inadequate to accomplish the desired result. If the national banks sold bonds each year to the full \$25,000,000 authorized, the continuance of this procedure for the twenty years allowed by the act would serve to eliminate but \$500,000,000 out of a total of over \$700,000,000 of national bank notes then outstanding. In the second place, instead of requiring the exchange of all 2 per cents purchased by the Reserve banks for the new 3 per cent obligations, the act permitted the Reserve banks, at their discretion, to issue exactly the same type of notes it was proposed to eliminate.

Practical significance.—As a practical matter, the retirement of national bank notes under these provisions of the Federal Reserve Act has been of no consequence. Only a few millions of Federal Reserve bank notes were ever issued for this purpose. When the United States entered the World War I, the intense demand for hand-to-hand money made it seem advisable to the national banks to retain their circulation, and national bank note issues remained outstanding in the amount of between \$700,000,000 and \$800,000,000

up to the beginning of the depression. The bonds securing national bank note circulation became callable in 1930, but, at the desire of the national banks, they were not called at that time.

The Federal Home Loan Bank Act of July 22, 1932, provided that for a period of three years from its date of enactment national banks might issue notes secured by all outstanding bonds of the United States bearing interest at a rate not exceeding $3\frac{3}{8}$ per cent per annum. Under this provision, the national banks expanded their note issues by about \$300,000,000 in the two years following.

The question of the retirement of national bank notes was finally settled in the spring of 1935 without any reference to Federal Reserve bank notes. On March 10, 1935, Secretary of the Treasury Morgenthau disclosed the intention of the Administration to use the devaluation profits not allocated to the stabilization fund to retire, the following summer, \$675,000,000 of 2 per cent consols and Panama Canal bonds of 1936 and 1938, which would thereby force the retirement of a like amount of national bank notes. Since the special note issue privilege under the Home Loan Bank Act also expired in the summer of 1935, the security available for national bank note issues would be entirely withdrawn.

Although Federal Reserve bank notes were not used to any appreciable extent for the purpose for which they were intended, they have been issued in substantial amounts in three other connections. This type of note, secured by Pittman certificates of indebtedness, was used as a substitute for silver certificates for a few years under the operation of the Pittman Act of 1918. They were subsequently all retired by the Federal Reserve banks, only to be brought to life again under the Emergency Banking Act of 1933, when slightly more than \$200 million of these notes were issued. These notes were likewise retired shortly. The third occasion on which Federal Reserve bank notes were used was in 1942. The peculiar way in which these notes got into circulation at that time is described by Professor Spahr as follows:

At that time [December 1942] the Treasury and Reserve Board, by a manipulation, involving a so-called "retirement" before "issuance," entered

into an agreement under which the Treasury began to pump \$660,000,000 of "National Currency" notes into circulation through the Federal Reserve banks. These partially printed notes, intended to be Federal Reserve bank notes and issuable only by the Reserve banks as their liabilities, were, by a sleight-of-hand performance, put out by the Treasury as its liabilities and received by the Reserve banks as reserve assets rather than as their liabilities. This was outright fiat money and the procedure followed was not authorized in any law. The Treasury improperly and illegally received a deposit on the books of the Reserve banks for the \$660,000,000 of Federal Reserve bank or "National Currency" notes turned over to the Reserve banks. These banks improperly and illegally added \$660,000,000 of fiat paper money to their reserves.³

The power to issue Federal Reserve bank notes for special purposes, as provided for in Section 18, par. 6 of the Federal Reserve Act, was repealed by the act of June 12, 1945. Since national bank notes had been in the process of retirement for a decade at the time the latter act was passed, it is strange that the whole of Section 18 was not repealed. The original provisions of this Section were allowed to remain on the books, however, although without present significance.

On April 30, 1947, \$421 million of Federal Reserve bank notes and \$109 million of national bank notes, both in process of retirement, remained outstanding. These amounts do not constitute liabilities of the Federal Reserve banks and national banks.

FEDERAL RESERVE NOTES

Introduction.—Federal Reserve notes were provided for in the Federal Reserve Act in order to furnish an elastic element in the bank note currency of the country. Specifically, the Act states (Section 16) that

Federal Reserve notes, to be issued at the discretion of the Board of Governors of the Federal Reserve System for the purpose of making advances to Federal Reserve banks through the Federal Reserve agents... and for no other purpose, are hereby authorized. . . The Board shall have the right, acting through the Federal Reserve agent, to grant in whole or in part, or to reject entirely the application of any Federal Reserve bank for Federal Reserve notes; but to the extent that such application may be granted the Board of Governors . . . shall, through its local Federal Reserve agent, supply Federal Reserve notes to the banks so applying, and such

³ W. E. Spahr, "Federal Reserve Board Out of Bounds Again," *Commercial and Financial Chronicle*, June 19, 1947.

bank shall be charged with the amount of notes issued to it and shall pay such rate of interest as may be established by the Board of Governors . . . on only that amount of notes which equals the total amount of its outstanding Federal Reserve notes less the amount of gold or gold certificates held by the Federal Reserve agent as collateral security.

As is clear from the foregoing provisions, the Board of Governors is given complete control over the issuance of Federal Reserve notes. It may refuse to grant the application in whole or in part of any Federal Reserve agent for notes and may charge interest on notes not secured by gold.

As a matter of practice, the Board of Governors has never exerted these powers.⁴ Applications for notes from the Federal Reserve agents have regularly been granted in full so long as the collateral was adequate and eligible under the terms of the Act. This negative attitude has quite properly been adopted on the ground that in a country such as the United States, with a highly developed check system, the control of credit expansion should be centered on the check currency rather than on bank note issues. Improper expansion of bank credit appears first in the check currency, to be followed by an increased demand for bank notes. To refuse to issue such notes would put a stop to the expansion, but only at the cost of throwing the whole system into utter confusion. The Board has accordingly centered its efforts to control credit on checking deposits and has granted all proper applications for notes from Federal Reserve agents.

With this introductory statement regarding the attitude of the Board of Governors toward its powers over the issuance of Federal Reserve notes, we may consider such notes from the standpoints of parity, security, and elasticity.

Parity.—Federal Reserve notes are entirely satisfactory as regards parity. They are the obligations of the issuing banks and of the United States government, and are "receivable by all national and member banks and Federal Reserve banks and for all taxes, customs, and other public dues. They shall be redeemed in lawful money on demand

⁴ Except for the interest charge levied on Federal Reserve notes in 1947, as noted in the previous chapter. However questionable the propriety and legality of this action by the Board, it was not done as a means of controlling the amounts of Federal Reserve notes, issued to the Reserve banks, and hence does not invalidate the statements made in this paragraph.

at the Treasury . . . , or at any Federal Reserve bank." The above provisions of the Federal Reserve Act are ample to secure the maintenance of parity between Federal Reserve notes and standard money. Being redeemable at the Treasury or at any Federal Reserve bank, there are thirteen redemption agencies in all, located in thirteen important centers throughout the entire country. In addition, the fact that these notes are obligations of the United States and have been used in all payments since 1933 as valid tender makes it certain that they will not fail to be maintained at par.

Security.—Quoting again from the Act:

Any Federal Reserve bank may make application to the local Federal Reserve agent for such amount of Federal Reserve notes hereinbefore provided for as it may require. Such application shall be accompanied with a tender to the local Federal Reserve agent of collateral in amount equal to the sum of Federal Reserve notes thus applied for and issued pursuant to such application. The collateral security thus offered shall be notes, drafts, bills of exchange, or acceptances acquired under the provisions of section 13 of this Act, or bills of exchange endorsed by a member bank of any Federal Reserve district and purchased under the provisions of section 14, or gold certificates, or direct obligations of the United States. In no event shall such collateral security be less than the amount of Federal Reserve notes applied for.

This is usually summed up more succinctly by stating that the required security consists of commercial paper, gold certificates, or government obligations to the full amount of the notes issued. Federal Reserve notes, being obligations of the United States, are guaranteed notes; and it is this guarantee that, as was the case with national bank notes, constitutes the real security to the individual noteholder. As such, it is of unquestioned soundness. The commercial paper, gold, or government obligations then act as security to the government in case of failure of a Federal Reserve bank and, in addition, the notes constitute a first and paramount lien on all the assets of the issuing bank, so that the government is amply protected.

Elasticity.—From the standpoints of parity and security to the individual noteholder, Federal Reserve notes are neither much better nor much worse than national bank notes or Federal Reserve bank notes. As regards elasticity, however, Federal Reserve notes are decidedly superior to the two

latter types. We shall therefore discuss this characteristic in some detail.

Expansibility.—As noted earlier in the chapter, the ability of note issues to expand depends upon the type of collateral required as security and the size of the reserve that must be, or as a matter of practice is, maintained against such issues. The collateral behind Federal Reserve notes may be commercial paper or United States obligations, as well as gold certificates. The amount of commercial paper normally tends to expand and contract with the needs of business and so should furnish ample security at all times. In the great depression, however, there was a large demand for hand-to-hand money, as a result of hoarding and bank failures, and the amount of commercial paper was small. Because of this situation, the Glass-Steagall Act, passed in 1932, permitted the Reserve banks to use government securities as collateral, and this provision was made a permanent part of the Act in 1945. Since the amount of direct government obligations available as security is enormous as a result of the war, security requirements are such as to permit far more than any possible desired expansion of Federal Reserve note issues.

The limits on the expansibility of Federal Reserve note issues set by the legal reserve requirements are not onerous. The original Federal Reserve Act required the maintenance of a minimum reserve of 40 per cent in gold against Federal Reserve notes and, except for changing the wording of the requirement to "gold certificates" by the Gold Reserve Act of 1934, no alteration of this requirement was made for over thirty years. By the act of June 12, 1945, however, required reserves against Federal Reserve notes were reduced from 40 to 25 per cent. This means that the expansibility of Federal Reserve note issues is now limited to four times the amount of gold certificates available as reserve, thus giving a possibility of expansion that is more than adequate to meet any normally recurring demands of business for hand-to-hand currency. In order to provide for the redemption of the notes in Washington, the maintenance of a redemption fund of not less than 5 per cent is required, but this is counted as part of the 25 per cent reserve and hence does not decrease the degree of expansibility already mentioned.

Contractibility.—The Federal Reserve Act also includes provisions that are intended to bring about the contraction of Federal Reserve note issues after the need for them has passed. The notes, although demand liabilities of the Reserve banks and fundamentally the same in nature as their deposits, cannot be counted by *member banks* as part of their legal, or required, reserves, the law requiring all the legal reserves of member banks to be in the form of deposits with the Reserve banks. Thus the member banks, having received Federal Reserve notes on deposit from their customers, will be inclined to send them in to the district Reserve bank for credit to their reserve accounts. Even if their reserve accounts are sufficiently large, it is probable that the member banks find it desirable to send the notes to the Reserve banks for credit, since the latter institutions pay all expenses connected with such shipments of notes, while if a member bank wishes to send some of its surplus funds to a correspondent bank in New York, for example, to be loaned out in the call loan market, it will have to pay the shipping expenses if notes are used for this purpose. And, even aside from the expense of shipping the notes, it is much more convenient for a member bank to write a check against its reserve account and mail that to its New York correspondent (or transfer the desired amount of funds by wire) and send the notes in to the district Reserve bank, which is usually nearer and more convenient to ship to. If bonds or other securities are purchased with surplus funds, the same line of reasoning prevails. It is more convenient to pay for such purchases with drafts than to try to use Federal Reserve notes for that purpose.

But there is another motive, and a more powerful one, that impels the member banks to send Federal Reserve notes in to the Reserve bank, and that is *the desire on their part to extinguish their indebtedness at the reserve institution*. When a member bank wishes to obtain Federal Reserve notes, it normally rediscounts some of its commercial paper with the Reserve bank and takes the proceeds of the loan in the form of such notes. This is almost certain to be the case in periods of business prosperity or seasonal activity when Federal Reserve note issues are expanding fairly rapidly. The member bank in this way incurs a debt at the Reserve bank upon

which it must pay interest, and it is decidedly profitable to the member bank to retire this indebtedness as soon as it obtains idle funds that may be used for this purpose. Therefore, when a period of expansion has passed, the Federal Reserve notes begin to accumulate in the hands of the member banks, and these institutions will send in all such surplus notes to the Reserve bank to pay off their obligations and relieve themselves of the attendant interest burden.

Following the devaluation of the dollar in 1934, heavy increases in gold imports led to nearly parallel increases in member bank reserves and resulted in the accumulation of large excess reserves by these banks. Under these circumstances, member banks met the demand for notes merely by withdrawing some of their excess reserves in this form, rather than by borrowing at the reserve banks. Later, during World War II, member banks used their excess reserves as the basis for a large expansion of earning assets (loans and government securities) and deposits, while the security for added Federal Reserve note issues was obtained by the Reserve banks through the purchase of government obligations. As a result, the expansion of bank credit, in the form both of notes and of deposits, was accomplished during the war period without substantial borrowing at the Federal Reserve banks. Consequently, the desire of member banks to extinguish indebtedness at the Reserve banks has not played a part in bringing about a contraction of note issues for more than a decade. Nevertheless, even without this incentive, the forces mentioned in the first paragraph of this section have operated to insure contractibility of note issues.

It should be clear that it is to the interest of member banks to send surplus notes in to the Reserve banks for credit. But there are twelve Reserve institutions and some of the notes that any one Reserve bank will receive from its members will be the notes of one or more of the other eleven district banks. In order to make sure that notes of other Reserve banks will be sent back to the issuing bank for redemption, and so will not circulate indefinitely in a district far removed from that in which the note was issued, the Federal Reserve Act provides that a 10 per cent tax be levied against any Reserve bank on any such notes of another Reserve institution

as it may pay out over its counter. Further, no Reserve bank is allowed to count the notes of another Reserve bank as part of its legal reserves, so that there is no question but that all Federal Reserve notes of other banks received by a given Reserve bank will immediately be sent back to the original or issuing banks for redemption.

Emergency elasticity.—Since the quality of elasticity is present, or may be present, in at least a part of the Federal Reserve note issues, these notes may be said to fulfill satisfactorily the third requirement of a good system of note issue as far as ordinary elasticity is concerned. The Federal Reserve Act also makes provision for emergency elasticity. The Board of Governors is given the authority to suspend any reserve requirement of the act for certain specified periods if it is deemed necessary, provided that if the reserve against Federal Reserve notes falls below 25 per cent, a graduated tax—to increase with the size of the deficiency—be levied against the deficiency below this figure. This is avowedly an emergency measure. The Board of Governors has the power to allow practically any degree of expansion that conditions may demand, while the graduated tax makes such expansion increasingly unprofitable and assures a rapid contraction of note issues as soon as the emergency has passed.

Monetary elasticity and the Federal Reserve System.—Before leaving the subject of bank notes, some qualification of the discussion of the preceding section is necessary lest it be inferred that Federal Reserve notes furnish the only elastic element in the country's hand-to-hand currency. As a matter of fact, such is far from being the case, as we shall attempt to show. In discussing the elasticity of Federal Reserve notes, it was assumed that such notes were paid out to member banks whenever the latter borrowed or drew down their accounts at the Reserve banks to obtain hand-to-hand money. Suppose, however, that the Reserve banks, instead of meeting the demand for hand-to-hand money on the part of members with Federal Reserve notes, pay out United States notes or silver certificates to the member banks when the latter need to obtain hand-to-hand money. There would be just as much incentive to the member banks to send in this money as though they had received Federal Reserve notes

from the Reserve bank instead of other forms of lawful money. Consequently, as the greenbacks or silver certificates accumulate in the hands of member banks, after the need for them in circulation has passed, these institutions will send them in to the Reserve banks to decrease their indebtedness or build up their reserve accounts in exactly the same fashion that they would send in Federal Reserve notes under the conditions depicted in the preceding section.

As a matter of fact, in certain years in the twenties when gold was still permitted in circulation, the Federal Reserve banks followed the policy of paying out gold certificates to meet the demands of their members for hand-to-hand money. More recently, at times, silver certificates and United States notes have been put into circulation in this fashion. The result has been that lawful money in circulation has attained a degree of elasticity that closely approaches that of any asset-secured bank note issue. What has happened is that the Federal Reserve banks have become depositories for practically all of the surplus hand-to-hand money of the country, so that when more money is wanted to meet business needs, it must be obtained as a rule from the Reserve banks. The effect of these factors has been to impart a fairly high degree of elasticity to all forms of hand-to-hand money. Moreover, much of the time from 1931 through 1941, the amount of collateral in the form of gold and gold certificates behind Federal Reserve notes was nearly as great as (in a majority of the years, greater than) the amount of Federal Reserve notes in circulation. This would seem to demonstrate fairly conclusively that, from 1931 up to our entry into World War II, an elastic system of note issue was not essential to monetary elasticity in the United States.

The utility of Federal Reserve notes.—It is not possible to appraise the utility of Federal Reserve note issues from the situation that prevailed in the years following 1931, or from the period from 1923 to 1930 that was somewhat similar in regard to Federal Reserve notes. In both of these periods the United States experienced large increases in its gold stock, much of which found its way into the Reserve banks, giving them large surplus reserves. In the earlier period, 1923-1930,

the Reserve banks met member bank demands for hand-to-hand money in considerable part by paying out gold certificates. After 1933, gold certificates were not permitted to circulate, but were used as security for Federal Reserve notes up to 100 per cent. However, the fact that the elasticity of Federal Reserve notes appeared unnecessary in those periods does not demonstrate the lack of need or desirability of an elastic system of note issue.

One excellent illustration of the value of an elastic bank note issue is to be found in the events of the closing months of 1931 in the United States. From the spring of 1931 on, the amount of money in circulation (i.e., the amount of money outside the Reserve banks and Treasury) increased unseasonably as a result partly of an increase in hoarding, which came from a loss of confidence in the banks of many sections, and partly of an increased need for hand-to-hand money in those sections that had lost their banking facilities through bank failures. Nevertheless, up to the close of August 1931, the increased issues of Federal Reserve notes, were not secured by eligible paper to any large extent. In fact, on August 31 of that year, the amount of gold held by Federal Reserve agents as collateral for notes constituted 92 per cent of total notes issued to the Reserve banks and almost 110 per cent of Federal Reserve notes in actual circulation.⁵

On September 21, 1931, England departed from the gold standard, following severe financial crises in Austria and Germany during the summer. The immediate effect of England's action was the withdrawal of balances from the United States by France and other European powers. In some six weeks' time, the gold stock of the United States was reduced by slightly over \$700,000,000. Simultaneously, the domestic demand for hand-to-hand money increased by about \$400,000,000. This double strain was met, in large part, by an increase in member bank discounts (September 23–October 28) at the Reserve banks of \$407,000,000 and an increase in bills bought in the open market by the Reserve banks of \$482,000,000.

⁵ *Federal Reserve Bulletin*, September 1931, p. 540.

Without going further into detail, it may be noted that the amount of "free gold" in the Federal Reserve banks, i.e., gold not held as collateral for Federal Reserve notes and in excess of the required reserve against deposits, actually increased slightly during the six weeks in question. This was possible because eligible paper, represented by the increases in bills bought and bills discounted by the Reserve banks, was substituted for gold as security for Federal Reserve notes. Thus, at the end of October 1931, gold held as collateral against Federal Reserve notes amounted to but 56.6 per cent of total notes issued and to 64 per cent of notes in actual circulation.⁶

The utility of the elastic quality of Federal Reserve notes was again illustrated during World War II. Although the United States lost comparatively little gold during the war period, a vast increase in the demand for hand-to-hand money occurred, as is usually the case during wartime. This expansion of hand-to-hand currency was met in large part by an expansion of Federal Reserve notes. Thus, Federal Reserve notes in circulation on December 31, 1941, amounted to \$8,192,169,000, with gold and gold certificate collateral of \$8,724,000,000. Four years later, December 31, 1945, there were \$24,649,132,000 of Federal Reserve notes in circulation, with gold certificate collateral of \$10,523,000,000. The remaining collateral held by Federal Reserve agents consisted of \$15,403,201,000 of government securities and \$201,455,000 of eligible paper.

Since the total gold certificate reserves of the Reserve banks was \$17,862,924,000 at the close of 1945, it would clearly have been impossible to have increased note circulation to the extent necessary to meet wartime demands without the expansibility features of Federal Reserve notes.

The utility of Federal Reserve note issues, it should now be clear, lies in the ability to expand these issues up to four times the amount of gold available as security, or to meet demands for gold for export without contracting domestic circulation by substituting eligible paper or government securities for gold as security for such issues.

⁶ *Federal Reserve Bulletin*, November 1931, p. 648. See also pp. 603-4 of this issue for an analysis of the gold and currency movements outlined above.

Present importance of Federal Reserve notes.—Federal Reserve notes at the present time are by far the most important element in the hand-to-hand money circulation of the United States. At the end of 1926, Federal Reserve notes constituted about one-third of reported money in circulation. Ten years later, at the close of 1936, the proportion of Federal Reserve notes to total circulation was about two-thirds. At the end of April 1947, Federal Reserve notes comprised nearly 85 per cent of total money in circulation.

There are several reasons for the sharp relative increase in the importance of Federal Reserve notes noted above. After the spring of 1933, gold coin and certificates were no longer permitted to circulate. At the end of 1926 more than \$1 billion of gold coin and certificates were in circulation. Their place was largely taken by Federal Reserve notes. The retirement of national bank notes began in 1935, the figure for such notes in circulation falling from \$827 million in January 1935 to \$307 million at the end of 1936 and \$115 million at the close of April 1947. Their place has probably also largely been taken by Federal Reserve notes, although the improper issuance of Federal Reserve bank notes in 1942 about offset the decrease in national bank notes that had occurred up to that time. Federal Reserve bank notes in circulation have been declining since 1942, however, and Federal Reserve notes have presumably taken the place of the Federal Reserve bank notes that have been retired. Finally, silver dollars and certificates in circulation, which increased three-fold from 1934 to 1941, showed an increase of only slightly over 20 per cent from 1941 to the spring of 1947. In this latter period, total money in circulation rose by 152 per cent, so that the gap left by the much slower growth of silver dollars and certificates was filled, in large part at least, by increased Federal Reserve note issues.

Conclusion.—In this chapter we have been concerned with bank note issues in the United States and have noted the overwhelming importance of Federal Reserve notes in the hand-to-hand circulation of the country, an importance that will possibly increase slightly as the remaining Federal Reserve bank notes and national bank notes still in circulation are gradually retired. In the following chapter, attention will

be turned to the second, and more important, type of credit money for which the banks are responsible—the check currency.

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CHAPTER 12

COMMERCIAL BANK DEPOSITS— THE CHECK CURRENCY

Introduction.—As in the previous chapter on bank notes, we shall in this chapter preface the discussion of commercial bank deposits with some general observations on the use of checks in making payments and the reasons for including checking deposits under the head of bank credit money. Following this general consideration of the check currency, attention will be directed to the subject of commercial bank deposits in the United States.

The use of checks as means of payment.—In a majority of developed countries in the past, the chief form of bank credit money has been the bank note, usually in the form of central bank issues. In three countries, however—England, Canada, and the United States—checks have formed a substantially more important means of payment than bank notes. We are naturally particularly interested in the United States, and there is probably no country in the world in which the ordinary bank check is used as a means of payment—at least by individuals—to the extent that it is in this country.

In his report to the National Monetary Commission, Dr. David Kinley estimated that approximately 85 per cent of all money payments in the United States were made by means of checks.¹ Professor Fisher places the figure as high as 90 per cent.² In a more recent comment on the reliability of these estimates, Mr. Carl Snyder of the Federal Reserve Bank of New York made the following statement:³

This [90 per cent] seems at first sight a very high proportion, but even if all retail purchases and wage payments were in cash these would not

¹ *The Use of Credit Instruments in Payments in the United States*, Report of the National Monetary Commission (Washington, 1910).

² *The Purchasing Power of Money* (New York, 1911), p. 318.

³ *The Review of Economic Statistics*, February 1928, pp. 40-41.

represent above one-eighth of the total money transactions of the nation. Of course, there are other cash transactions, but, as compared with the astounding volume of check transactions, these are almost negligible.

We have made an estimate from the available figures that the total of all checks drawn on all the banks of the country was in 1927 over 750 billions of dollars. The actual volume of checks reported in 1926 was 606 billion dollars; and this as nearly as can be estimated, is something like 87 per cent of all checks debited to final account. . .

The total of currency in actual circulation outside the banks is now probably less than $3\frac{1}{2}$ billions of dollars (the figures published by the Treasury do not allow for losses by fire, burial and the like, and include, as well, a hypothetical 300 millions or so of gold which quite certainly is not in "circulation").

The estimated total of active demand deposits subject to check is around 25 billions of dollars, or over seven times the estimated amount of money in circulation. The "velocity" or average rate of turnover of the whole volume of these active deposits can only be approximated, but we have made estimates in the Reports Department of the Federal Reserve Bank of New York, that this average probably ranges from 25 to 30 times per year, with an estimate for 1927 of about 30 times. No kind of estimate is available for the actual rate of turnover of currency in circulation, but it seems doubtful if the whole of it turns over as fast as the average of demand deposits.

In view of these computations, it would seem that the estimate that cash transactions do not much exceed one-eighth of the total money transactions of the country is well grounded. Further, a variety of considerations would suggest that this ratio does not change greatly from year to year, save that the proportion of check transactions grow slightly greater.

In the light of all the evidence, both past and present, it is clear that the check currency constitutes an element of outstanding importance in our monetary system.

Credit money and the check currency.—In the definition of credit money in an earlier chapter (Chapter 2), it was stated that credit money is "any sort of instrument which is widely used as a medium of exchange and which, when so used, permits an economy in the need for full-bodied money or bullion." There is no doubt that bank notes accord with this definition, for their use permits an economy in the need for the standard of value and they pass freely from hand to hand as a medium of exchange.⁴

⁴ A medium of exchange, it will be recalled, was defined as a go-between which, having been accepted in exchange for goods or services, is, after a longer or shorter period given in exchange for other goods or services.

With checks, however, the situation is somewhat different. Checks are individual credit instruments. Various individuals in the business world have temporary surplus funds, which they deposit with the commercial banks, partially for purposes of safekeeping, but in larger measure for convenience in making payments, since they may draw orders on the bank requiring it to pay to a party designated on the order a definite amount of lawful money on demand. This is possible because the deposit itself is simply a right to receive lawful money on demand from the bank, so that the depositor has the right to order the bank to pay any portion or all of that deposit to a designated party (or to his order) without previous notice. These orders are the checks which constitute what we have designated the check currency. Such checks, though serving as a means of payment, do not, as a rule, act as media of exchange for a number of reasons. (1) A bank is obligated to pay a check only if the person who wrote it (the drawer) has a sufficient deposit with the bank to cover the amount of the check. The goodness of the check, therefore, depends upon the ability of the individual drawer to write it as well as upon the ability and the willingness of the bank to pay legitimate claims to lawful money. Smith may be willing to accept a check from Brown, whom he knows, but Jones, who does not know Brown, will probably hesitate to accept the latter's check if it is offered to him by Smith. (2) Checks are usually drawn for the amount of a specific payment, so that they are likely to be inconvenient for use in making further payments. (3) Lastly, checks are made payable to the order of a specific party, as a rule, so that they cannot be transferred to some other party without indorsement, which creates a liability against the indorser.

Because of the characteristics mentioned, the great majority of checks change hands only once, and so they cannot be said to act as media of exchange in any general sense. Checks, however, are merely evidences of rights to claim lawful money on demand. If it can be shown that these rights that the checks represent do pass from one person to another in exchange for goods and services and, in so doing, act as a substitute for lawful money, there is no reason for feeling that the inclusion of the check currency under the head of

credit money is inconsistent, in a fundamental sense, with the definition of credit money given in the second chapter. It is of small moment whether a given check acts as a medium of exchange or not, provided that the right it evidences serves in that capacity. But do these rights serve in this capacity in accordance with our definition of a medium of exchange?

Checks in an isolated community with one bank.—In attempting to answer this question, let us assume the simplest possible conditions at first, namely, an isolated community having no trade relations with outsiders and having but one large bank, with branches, which carries on all the commercial banking business of the community. The businessmen of the community will then all maintain their temporary surpluses in the form of deposits with this one bank. One man in the community, whom we shall call *A*, owes certain sums to *B*, *C*, and *D*, so he draws orders against his account in the bank authorizing that institution to pay to *B*, *C*, and *D* the amounts designated on the respective orders or checks, and *A* then sends these checks to the men in question in payment of his debts. Will *B*, *C*, and *D* take these checks to the bank and demand lawful money? In all probability, they will not. Instead, they will simply deposit the checks at the bank for credit to their respective accounts. The bank, in the latter case, will then decrease (or debit) the account of *A* by the aggregate amount of the three checks and increase (or credit) the accounts of *B*, *C*, and *D*, respectively, by the proper amounts. The latter men now find their rights to claim lawful money (their deposit accounts) increased by the amount of the deposited checks. Prior to this time, let us suppose, their accounts had been uncomfortably small, but now that they have been augmented by the amount of *A*'s checks, the three businessmen in question are able to draw their own orders against their revived accounts at the bank and use the checks so drawn in the payment of their own debts. The recipients of these checks will, in turn, deposit them at the bank and receive credits to their accounts, while the accounts of *B*, *C*, and *D* will again be drawn down by the amount of the checks they have written and sent to their creditors to make payments that were due.

In the transactions just indicated, *B*, *C*, and *D*. received

from *A* in payment for goods or services, not lawful money, but rights to claim such money from the bank. They used, in turn, not lawful money, but these same rights to make payments for goods or services that they had received. Deposits at the bank were thus used as media of exchange. Such transactions are typical of approximately nine-tenths of the payments that actually occur in this country today under somewhat more complicated conditions than those we have postulated. But, before bringing our hypothetical example a step nearer to actual conditions, we must stop to inquire why any other money than bank checks should be used at all.

In the example chosen, we assumed that *B*, *C*, and *D* did not present their checks (which they had received from *A*) at the bank to be cashed or exchanged for lawful money, and that assumption is largely in accord with actual conditions, although perhaps not entirely so. Possibly *B* is the employer of laborers who object to taking checks in payment for their labor services and want hand-to-hand money. Many of the laborers probably have no deposit accounts at the bank, so that *B* finds it advisable to exchange his check, or a part of it, for hand-to-hand money, and use the latter to pay his laborers' wages. If the bank, in our imaginary example, issues notes, *B*'s demand for hand-to-hand money may be met by giving him bank notes in exchange for his check; otherwise, he will receive lawful money. In the former case, the bank merely substitutes one form of demand obligation for another; but whether *B* receives bank notes or lawful money is of no importance in the present connection. In either case, the fact remains that, to the extent that the bank paid out hand-to-hand money to *B* when he presented *A*'s check, the check (or deposit represented by the check) was not being used as a medium of exchange, for the second part of the exchange transaction (exchanging the deposit for goods) was never completed. As long as some payments continue to be made in media other than checks against deposit accounts, the latter can never entirely usurp the place of other forms of money; and it may be safely asserted that the time will never arrive when, even in entirely domestic transactions, everyone will find it more convenient to use checks than hand-to-hand money for every payment.

Checks in an isolated community with several banks.—

We shall now return to our isolated community and study it under slightly more complicated conditions. Assume that an additional bank has been established in the community. Now, when *A* draws checks against his deposit account in favor of *B*, *C*, and *D*, suppose that *B* and *C* deposit their checks, not in *A*'s bank, but in the other banking house that has been established. The latter bank will then have some claims against the former. *B* and *C*, however, and other depositors of the new bank will, in all probability, have written checks against their accounts and paid them to depositors of the old bank where they will be deposited, so that this institution will also have received claims against its new competitor. At the end of the day's business the original bank will have accumulated, say, \$47,000 in claims against the second bank, while the second bank has, we shall suppose, a total of \$50,000 in claims (checks) against the first institution. Obviously, it would be foolish for each bank to pay to the other the total amount of claims against it in lawful money. Instead, the two banks will cancel their claims against each other so far as possible and pay only the difference in cash. In this case, the original bank would have to pay the newer institution the balance of \$3000 in favor of the latter, but the other \$47,000 of conflicting claims would be canceled. In so far as this cancellation process takes place, deposit credits actually take the place of other forms of money and so act as a medium of exchange.

If more banks are introduced into our hypothetical community, essentially the same process of check cancellation will be resorted to. This is what is known as the *clearing process*. At a designated time, each bank in the community will send its agent to a common meeting place, known as the clearing house, with all the claims that it has against each other bank in the community. At the clearing, each bank sets the sum of the claims that it has against all the other banks of the community over against the sum of the claims that all the other banks have against it, and the difference, if any, is paid or received in cash. That is, when a bank has more claims against it than it has against the other banks, it pays the difference to the manager of the clearing house. The manager

then uses the cash so paid to him to meet the claims of those banks that had a favorable balance, *i.e.*, those banks that had more claims against all the others than the others had against them. Since the process is reciprocal, the payments of cash into the clearing house by the banks with adverse balances are bound to be just sufficient, in the aggregate, to meet the claims of the banks with favorable balances. No cash will remain with the clearing house manager at the end of the clearing process, for all that he has received from some of the banks has been paid out, in turn, to others. In fact, unless this is actually the case, some error has been made in adding and checking the sum of the items due to and due from the different banks that have participated in the clearing.

An example will serve to make this description somewhat clearer. Assume four banks, *A*, *B*, *C*, and *D*, with checks at the clearing house as follows:

Against	Bank <i>A</i>	Bank <i>B</i>	Bank <i>C</i>	Bank <i>D</i>	Total
Bank <i>A</i>		\$40,000	\$ 5,000	\$20,000	\$65,000
Bank <i>B</i>	\$30,000		15,000	23,000	68,000
Bank <i>C</i>	17,000	10,000		35,000	62,000
Bank <i>D</i>	23,000	20,000	37,000		80,000
Total	\$70,000	\$70,000	\$57,000	\$78,000	\$275,000
Bank <i>A</i> is owed					
\$5,000					
Bank <i>B</i> is owed					
2,000					
Bank <i>C</i> owes					
\$5,000					
Bank <i>D</i> owes					
2,000					
<u>\$7,000</u> <u>\$7,000</u>					

From the foregoing tabulation it will be seen that the amounts due to the clearing house by banks *C* and *D* just equal the amounts due from the clearing house to banks *A* and *B*. Further, it shows that, out of a total of checks amounting to \$275,000, only \$7000 in cash, or 2.54 per cent, was necessary to settle the balances that did not cancel. The remaining \$268,000 in checks acted as a substitute for lawful money in the payments in which they were used.

Checks in several communities with numerous banks.—

Now let us expand the territory in our example to include a number of communities, each with a number of banks. We shall also assume a central or bankers' bank to be in operation in this territory. The relations between individual banks and

a central institution are practically identical with the relations established between businessmen and their banks. Just as businessmen keep a large share of their ready cash reserves in the form of deposits with their banks, so the latter institutions keep a large portion of their reserves on deposit with the central bank. In our enlarged system, therefore, each individual bank will have a demand deposit with the central bank that constitutes a substantial part of its reserve against its own deposits.

With the larger number of communities now included in our example, considerable numbers of checks received on deposit by the various banks will be drawn on banks located outside the community, and so will not be collectible through the local clearing house in the manner already described. Because of the presence of the central bank, however, the process of collecting such checks is extremely simple. The out-of-town checks are first sent to the central bank. That institution, upon receiving them, debits the reserve deposit accounts of the banks on which they are drawn by the proper amounts and credits the reserve accounts of the banks sending in the checks by similar amounts. The central bank thus acts as a clearing house for all the banks of the territory it serves, for, at the end of each day, each bank will have had its reserve account credited by the sum of all the checks it had held on other banks in the region, and debited by the sum of all the checks the other banks of the region had held against it, the result being a net debit or credit to its reserve account, as the case may be. No cash will have been paid out, the whole process having been carried through by making the appropriate debits and credits on the books of the central bank. It is also probable that balances at the local clearing houses will no longer be paid in cash, but with checks drawn against the paying banks' accounts in the central institution. Referring to the example given in the previous section, banks *C* and *D* will draw checks against their accounts at the central bank to pay their adverse balances. At the central bank, the accounts of *C* and *D* will be debited by the proper amounts (\$5000 and \$2000 respectively), while the accounts of *A* and *B* will be credited. When this situation exists, the whole check-using process is reduced to a simple form for the entire bank-

ing system, which is comparable with that existing in our original example of a single community with a single bank. A few more book entries are necessitated, it is true, but the result is the same, and once more, under the complicated conditions of actually existing banking systems, the bulk of the checks cancel one another, rights to claim lawful money rather than lawful money itself act as the chief type of medium of exchange, and only the demands of the community for lawful money as such have to be met out of the banking reserve of the country.⁵

Why stop at checks?—Although, in a strictly commercial banking system, the great bulk of the deposits of the banks would be subject to check, and would hence come under the head of check currency, as a matter of practice the so-called commercial banks also accept deposits subject to notice of withdrawal against which checks may not be drawn, even though the notice requirement is frequently waived. The question arises as to whether or not these deposits should be included under the head of money as well as the check currency. They should not for the reason that they do not serve as a medium of exchange. In order to utilize such deposits in making payments, it is necessary to withdraw them in the form of lawful money or bank notes, or to transfer them to checking accounts where they become a part of the check currency.

The use of check currency, through cancellation of claims at the clearing house, does not merely postpone the use of hand-to-hand money, but obviates its use to a large extent. In the case of deposits not subject to check, as well as in the case of charge accounts, commercial credit instruments such as time promissory notes and acceptances, and longer term instruments such as bonds and mortgages, payment in some form of medium of exchange is postponed, but not eliminated.

⁵ These demands may be for full-bodied money for purposes of export or for use in the arts, legal tender money for tax payments, money for the payment of wages to laborers who are unwilling to accept checks, or hand-to-hand money for use as pocket money. If bank notes are valid tender for tax payments, all but the first of these demands may be met with bank notes rather than lawful money; but, in any case, checks may be said to serve as money until converted into some form of hand-to-hand money rather than being transferred to another deposit account. Lawful money, as the term has been interpreted in the United States, means legal tender money permissible for use as bank reserves. In the past, this has been confined to government money in this country.

Consequently, we shall not include these types of instrument under the head of money.

Check currency in the United States.—The preceding general observations on the check currency indicate the necessity, where there is more than one bank, of collecting the checks of other banks before the depository bank can utilize the funds deposited with it. This is especially important in a country like the United States where the number of banking units is large. In considering commercial bank deposits in this country, therefore, attention will first be directed to the procedure followed in collecting checks on other banks located outside the home city. The nature of the process of collecting local checks through the clearing house has been indicated earlier in the chapter and needs no further consideration.

THE COLLECTION OF CHECKS

The development of the Federal Reserve collection system.—As already noted in an earlier connection (Chapter 9), the Federal Reserve Act gave the Federal Reserve Board the power to act, directly or through one of the Reserve banks, as a clearing agency for the Federal Reserve banks, and to require each Reserve bank to act in the capacity of a clearing house for the member banks of its district. Under this authority the Board early took measures with a view to establishing a comprehensive and economical system of check collections for the banks of the United States.

The Gold Settlement Fund.—The first decisive step in the procedure of the Board was the establishment, in May 1915, of the Gold Settlement Fund to assist in the clearing and collection of interdistrict checks. Prior to this time interdistrict settlements had been made through reciprocal accounts carried by the Reserve banks with each other. The increase in the number of interdistrict items, however, made some less unwieldy method of settlement essential.

Under the original plan each Federal Reserve bank was required to deposit with the Federal Reserve Board \$1,000,000 in gold plus the amount it owed to all the other Reserve banks at the time the deposit was made. These amounts were to count as part of the Reserve banks' gold reserves, a record of each bank's holdings of gold being kept

on the books of the fund by a settling agent appointed by the Federal Reserve Board. After the original deposits had been made no Reserve bank was required to keep more than \$1,000,000 in the fund, being permitted to withdraw any surplus over that figure if desired. With the growth in inter-district settlements, however, much larger amounts have been deposited in the fund than were originally required. On the date of the first settlement, May 27, 1915, the amount in the fund was \$18,450,000.⁶ After the War, the fund averaged about \$500,000,000 until 1934. Since the passage of the Gold Reserve Act of 1934, the Reserve banks have kept practically their total gold certificate reserves divided between the Interdistrict Settlement Fund⁷ and the Federal Reserve Agents' Fund, the amount in the former fund being over \$8,000,000,000 at the close of 1939.

The institution of the Gold Settlement Fund greatly facilitated interdistrict settlements by providing a clearing system for the twelve Reserve banks. As the fund operates, each Federal Reserve bank and clearing branch periodically wires the settlement agent the amount that it owes to each other bank. These amounts are then entered on a regular clearing sheet, canceled so far as possible, and favorable or unfavorable balances entered for the banks receiving them on the books of the Interdistrict Settlement Fund. When the fund was first established, settlements were made weekly—at the close of business on Wednesdays—but with the installation of a leased wire system in June 1918, together with a large increase in the amount of interdistrict settlements, it became possible and desirable to adopt a system of daily settlements. Such a system was accordingly introduced on July 1, 1918. After this it also became feasible to develop a system of telegraphic transfers of funds whereby each Federal Reserve bank was enabled to transfer funds without charge to other districts by wire for its member banks, settlements of such transfers being made through the Gold Settlement Fund as in the case of checks.

The Federal Reserve Agents' Fund, which was established

⁶ Spahr, *The Clearing and Collection of Checks*, p. 170.

⁷ The name of the fund was changed from Gold Settlement Fund to Interdistrict Settlement Fund in the Annual Report of the Board of Governors for 1935.

on September 8, 1915, was designed to facilitate the transfer of gold, by means of book entries, between the Federal Reserve agents and the Federal Reserve banks, or between either agents or banks and the Treasury, in connection with the issuance and retirement of Federal Reserve notes. The technique of its operation is similar to that of the Gold Settlement Fund and needs no detailed consideration.

The voluntary system of intradistrict collection and clearing.—Directly after the institution of the Gold Settlement Fund, the first step was taken in connection with the establishment of a satisfactory intradistrict clearing system. As it was not deemed desirable to interfere too greatly with existing collection methods during the period allowed for member banks to transfer their reserves from correspondent institutions to the Federal Reserve banks, the first plan for intradistrict collection and clearing introduced by the Board was voluntary rather than compulsory. The Board did not attempt to specify the exact methods to be employed, but merely required that, by June 1915, each Federal Reserve bank should be prepared to act as a clearing house for such member banks of its district as desired to avail themselves of this facility. Prior to this date, two Federal Reserve banks—Kansas City and St. Louis—had, on their own initiative and with the approval of the Federal Reserve Board, established compulsory clearing systems for member banks in their respective districts. The Kansas City bank continued its compulsory system after June 1915, and, while the Federal Reserve Bank of St. Louis made membership in its system optional after that date, some 80 per cent of the member banks of the district elected to remain in the system.⁸

In each of the remaining districts a voluntary system was introduced at the time fixed by the Federal Reserve Board. The typical procedure followed was for the Reserve bank of the district to receive on deposit at par from member banks, and for immediate credit, checks on such other banks in the district as had elected to join the system. Upon receipt of such checks, the Reserve bank would not only immediately credit the accounts of the payee banks, but would also debit the accounts of the drawee banks before sending the checks to

⁸ Spahr, *op. cit.*, p. 168.

the latter to be debited to the accounts of the drawers.⁹ This method of immediate debit and credit on the books of the Reserve bank was satisfactory neither in principle nor in practice. It was wrong in principle because a check, which is a written order to pay a certain amount, should not logically be paid by the bank on which it is drawn until the latter is in receipt of said order. It was disconcerting in practice because the drawee banks were never able to know the state of their balances at the Reserve bank, which might be overdrawn at any time as a result of the practice of immediate debit. Whether for this reason, or simply because the member banks preferred to use the old, accustomed methods, the voluntary system was not a success. But few banks chose to enter the system, and it was abandoned the following year in favor of a system that was compulsory for all member banks.

The compulsory clearing and collection system.—This system, which was introduced in July 1916, was compulsory in certain respects only. Under it member banks were required to pay at par all checks drawn on and presented to them through the Federal Reserve banks of their districts. Receipt of checks by the drawee banks from their Federal Reserve bank through the mails was to be considered as presentation at their counters. The drawee banks might pay such items by draft on their accounts at the Reserve bank (or by authorizing the Reserve bank to debit their accounts), by other checks and drafts acceptable to the Reserve bank, or by shipment of currency. When currency was shipped the expenses attendant upon the shipment were to be borne by the Reserve bank, thus relieving the drawee banks of any possible expense in connection with the payment of checks at par.

To this extent the system was compulsory. On the other hand, no member bank was required to collect its out-of-town checks through its Federal Reserve bank. Collection through correspondent channels was still permitted if desired and, as a matter of fact, a goodly number of member banks continued to use the older method of collection until after the concentration of reserves in the Federal Reserve banks under the amendment of June 21, 1917.

Aside from the element of compulsion, the most significant

⁹ *Ibid.*, p. 172.

change brought about by the new system was the substitution of deferred availability for the immediate credit feature of the voluntary systems. As already noted, the drawee banks were required, under the compulsory system, to remit to the Reserve banks at par upon receipt of checks sent to them by the latter for payment. The accounts of the drawee banks were accordingly not debited at the Reserve bank until the latter had received advice of payment from the drawee or until sufficient time had elapsed for it to receive such advice. In accordance with this procedure, the banks sending checks to the Federal Reserve bank for collection were given a deferred credit at the Reserve bank upon receipt of such checks. This credit did not become available as reserve until sufficient time had elapsed for the Reserve bank to collect the checks from the drawee banks.

In order to make the deferred credit plan workable in practice, availability schedules have been prepared by each Federal Reserve bank, which show the length of time necessary to collect a check on any point in the United States. The schedule of each Reserve bank for its own district is supplemented by a time schedule showing the collection time for checks between various Reserve banks and their branches, so that the entire country is adequately covered. The time allowed for collection is based on the average time required for the collection of checks on banks in given zones or areas, and the reserve accounts of the banks sending in checks for collection are credited at the Reserve banks at the expiration of the average collection period, even though, in some instances, particular checks may require more than the average time for collection. In the latter event, the Reserve bank carries a float (i.e., uncollected items) for a period equal to the difference between the average and the actual time of collection. This practice is unavoidable if the system is to prove workable, as it would be inexpedient to operate on a schedule of actual collection time for every bank in the country.

The par remittance controversy.—The Federal Reserve Act, as amended by the act of September 7, 1916, authorized each Federal Reserve bank to receive from member banks or from other Federal Reserve banks for exchange or collection

checks or drafts payable upon presentation on *any bank* in its district. This implied that Federal Reserve banks were not only to accept for collection checks on nonmember banks in their districts, but also that they were to use whatever lawful means were necessary to collect such checks at par.¹⁰ Accordingly, the Reserve banks made an attempt to develop a system of par collection for the country as a whole. This attempt was furthered by the amendment to the Federal Reserve Act of June 21, 1917, which concentrated the reserves of member banks in the Federal Reserve banks and paved the way, through lessened restrictions, to a large increase in state bank membership in the system. This act also provided that nonmember banks might establish clearing accounts with, and hence collect checks through, the Federal Reserve banks in the same fashion as member banks. Finally, the Hardwick amendment of this date granted member and nonmember banks the right to levy exchange charges of $\frac{1}{10}$ of 1 per cent, but provided that "no such charges shall be made against the Federal Reserve banks." It was obvious from the wording of this amendment that when checks were presented to drawee banks by the Federal Reserve banks for payment no exchange deduction was permissible.

The Federal Reserve banks, believing with the Federal Reserve Board that they were impliedly required by the law to collect checks on all banks at par, adopted measures to accomplish the desired result. They bent every effort to make par remittance as easy and inexpensive as possible. Drafts on solvent member banks constituted acceptable remittances by nonmembers and, if currency had to be shipped, the cost of such shipment was borne by the Reserve banks. Nevertheless, many of the smaller banks, particularly in the South and West, objected to remitting at par and refused to consider checks received from the Reserve banks through the mails as being presented for payment at their counters. In such instances the Reserve banks employed agents, such as some bank or express company, actually to present the checks in person to the drawee banks in order to force the latter to pay them at par. This procedure was naturally irritating to

¹⁰ *Ibid.*, p. 196.

the exchange-charging banks, and in certain states the legislatures even passed laws authorizing the state banks to charge exchange, at their discretion, on checks presented at their counters when such checks were presented by the agent of a Federal Reserve bank or other banking institution. Some of the banks also brought suit against certain Federal Reserve banks to test the legality of the practices resorted to by the latter.

Space does not here permit a detailed account of the several court decisions affecting the remittance for checks at par.¹¹ It will suffice merely to sum up the results of these decisions. In the first place, it was decided that the Federal Reserve banks, acting through agents, had the right to present checks over the counters of the drawee banks if, in so doing, they did not accumulate undue amounts of checks for the purpose of forcing the drawee banks to remit at par. Secondly, it was decided in another case that it was not permissible for the Reserve banks to use coercive methods that are out of line with regular business procedure to compel remittance at par from nonmember banks. Thirdly, the constitutionality of the state laws permitting the charging of exchange was upheld unless the drawer of the check specifically required its payment at par in cash. Lastly, the legality of the procedure of the Reserve banks with respect to par collection from member banks was upheld in every particular.

In view of these decisions, the Federal Reserve banks were forced to modify their attempt to establish a universal system of par collection. Under the revised procedure, the Reserve banks refuse to accept for collection checks drawn on nonmember banks who will not remit at par. Checks on these banks must then be collected by the payee banks through correspondent channels as formerly. Although the usefulness of the Reserve bank collection system is thus somewhat reduced, the reduction is not serious. This is shown by the fact that, on December 31, 1947, all but 2041 banks out of a total of 14,078 were remitting at par. Still more significant, from the point of view of the collection system, is the fact that most of the non-par banks are very small institutions, so that the number of checks drawn on them is insignificant as

¹¹ See *ibid.*, Chapter VII, for a detailed and careful discussion of this controversy.

compared with the total of checks drawn on all banks in the country.

Current collection methods.—The methods employed under the Federal Reserve collection system have been indicated in a general way in the foregoing pages. In concluding this section of the chapter, however, the contrast between the old and the new systems, and the advantages of the latter over the former, may best be emphasized by a somewhat more precise description of the operation of the existing system than has yet been given.

Intradistrict collections.—The typical procedure in the collection of intradistrict items is for the payee bank to send its out-of-town checks and items to its Federal Reserve bank where it receives a deferred credit for the amount of the checks sent in. These checks are then sent by the Reserve bank to the drawee banks who remit for them at par to the Reserve bank. After the time shown by the availability schedule has elapsed, the payee bank's reserve account is credited, and either the drawee banks' accounts are debited upon receipt of advice of payment of the checks, or payment is made with a draft or currency sent by the drawee banks to the Federal Reserve bank.

This procedure is shown diagrammatically in the upper portion of Figure 11. A considerable saving of time may be effected in certain instances if an arrangement is made under which the payee bank sends checks directly to the drawee, at the same time notifying the Reserve bank of the transaction as shown in the lower section of the diagram. This plan has had a wide use in the second, and, to a lesser extent, in the third Federal Reserve districts.¹²

In the eleventh district (Dallas), by arrangement between the Reserve bank and the Reserve City Clearing House Association of Texas, a somewhat similar plan is in use. Any member of the association, or the country correspondent of a member, sends all of its checks on the banks of a particular reserve city to a member of the association for collection, at the same time sending a draft on the latter to the Federal Reserve Bank of Dallas. The Reserve bank then credits the account of the payee bank for the amount of the draft and

¹² *Ibid.*, p. 187.

debits the account of the reserve city bank against which the draft is drawn, with a consequent marked saving of time in the collection of checks drawn against reserve city banks.¹³

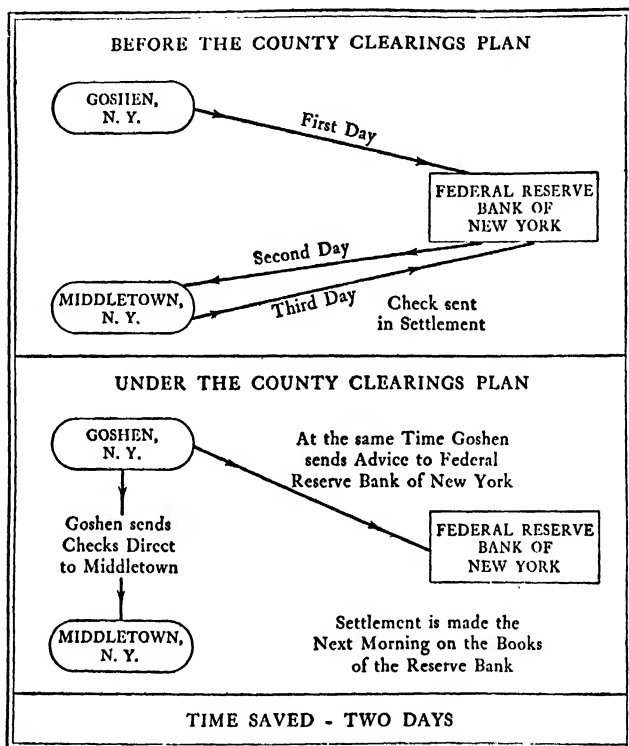


FIG. 11

(Courtesy of the Federal Reserve Bank of Philadelphia)

Interdistrict collections.—In collecting a check on a bank in another Federal Reserve district, the payee bank typically sends the check to its own Reserve bank where it receives a deferred credit for the amount. The check is then forwarded to the drawee's Reserve bank and collected from the drawee bank by the Reserve bank in the same fashion as an intra-district item. At the expiration of the time shown on the

¹³ *Ibid.*, pp. 188-89.

availability schedule, the payee bank's reserve account is credited by its Reserve bank, and the latter receives a credit from the drawee's Reserve bank when the check has been paid by the drawee. The settlement of balances among the Reserve banks themselves is effected each day through the Inter-district Settlement Fund as already explained.

While the procedure just described is typical, certain time-saving devices have also been employed to facilitate inter-district collections. When more convenient, the payee bank may send checks to a branch of its Federal Reserve bank instead of to the Reserve bank itself, the settlement of transactions of this sort being cared for by means of bookkeeping entries on the part of the branch and parent banks. Still more expeditious, in some instances, is the plan whereby the payee bank, by arrangement with its Reserve bank, send its out-of-district checks directly to the Reserve banks of the drawees' districts, at the same time notifying its own Reserve bank of these transactions. Finally, in a very few cases, where a large saving of time would result, the payee bank by special arrangement sends checks directly to drawee banks in other districts, the latter remitting directly to their own Reserve banks.¹⁴

Comparison with the old system.—The foregoing description of present collection methods under the Federal Reserve System demonstrates clearly their superiority to earlier methods. Since January 1, 1918, the Reserve banks have made no charge for the collection of checks, so that the banks of the country now enjoy without cost to themselves the benefits of an efficient and direct system of collection in striking contrast to the clumsy and expensive methods of earlier years. Through the Federal Reserve banks and the Interdistrict Settlement Fund the cancellation of claims through the clearing process has been carried to a remarkable degree, with consequent economy in the need for gold and lawful money in the banking process. Furthermore, the Reserve banks have developed a system for the collection of time items that is practically gratuitous and that supplements and broadens the usefulness of their check collection system. Even nonmember

¹⁴ *Ibid.*, p. 192.

banks, through their correspondent members, may and do make use of the Federal Reserve collection facilities, so that the system serves practically the entire country. While payee banks may still, and sometimes do, levy a charge against the depositors of out-of-town checks to compensate for the loss of interest while the checks are in the process of collection, this is a perfectly legitimate charge, not open to criticism. The fundamental evil of the old system—the deduction of an exchange charge by drawee banks—has been eliminated in all but a few small banks of minor significance.

COMMERCIAL BANK DEPOSITS

Classification of deposits.—Deposits of those banks in the United States that are reported as “commercial banks” may be classified as regards either the type of deposit or the nature of the depositor. Deposits are classified by type as (a) demand deposits, and (b) time deposits. If these banks did nothing but a strictly commercial banking business, practically all of their deposits would fall in the demand deposit category. As has already been pointed out, however, nearly all of the so-called commercial banks have savings departments and hence hold substantial amounts of time deposits.

The Board of Governors is directed by the Federal Reserve Act to define demand and time deposits. These definitions, as given in Regulation D of the Board, are reproduced below.

Section 1. Definitions

(a) **Demand deposits.**—The term “demand deposits” includes all deposits except “time deposits” as defined below.

(b) **Time deposits.**—The term “time deposits” means “time certificates of deposit”, “time deposits, open account” and “savings deposits”, as defined below.

(c) **Time certificates of deposit.**—The term “time certificate of deposit” means a deposit evidenced by a negotiable or non-negotiable instrument which provides on its face that the amount of such deposit is payable to bearer or to any specified person or to his order—

(1) On a certain date, specified in the instrument, not less than thirty days after the date of the deposit, or

(2) At the expiration of a certain specified time not less than thirty days after the date of the instrument, or

(3) Upon notice in writing which is actually required to be given not less than thirty days before the date of repayment,¹⁵ and

(4) In all cases only upon presentation and surrender of the instrument.

(d) **Time deposits, open account.**—The term “time deposit, open account” means a deposit, other than a “time certificate of deposit” or a “savings deposit”, with respect to which there is in force a written contract with the depositor that neither the whole nor any part of such deposit may be withdrawn, by check or otherwise, prior to the date of maturity, which shall be not less than thirty days after the date of the deposit,¹⁶ or prior to the expiration of the period of notice which must be given by the depositor in writing not less than thirty days in advance of withdrawal.¹⁷

(e) **Savings deposits.**—The term “savings deposit” means a deposit, evidenced by a pass book, consisting of funds (i) deposited to the credit of one or more individuals, or of a corporation, association or other organization operated primarily for religious, philanthropic, charitable, educational, fraternal or other similar purposes and not operated for profit,¹⁸ or (ii) in which the entire beneficial interest is held by one or more individuals or by such a corporation, association or other organization, and in respect to which deposit—

(1) The depositor is required, or may at any time be required, by the bank to give notice in writing of an intended withdrawal not less than thirty days before such withdrawal is made;

(2) Withdrawals are permitted in only two ways, either (i) upon presentation of the pass book, through payment to the person presenting the pass book, or (ii) without presentation of the pass book, through payment to the depositor himself but not to any other person whether or not acting for the depositor.¹⁹

¹⁵ A deposit with respect to which the bank merely reserves the right to require notice of not less than thirty days before any withdrawal is made is not a “time certificate of deposit” within the meaning of the above definition.

¹⁶ Deposits, such as Christmas club accounts and vacation club accounts, which are made under written contracts providing that no withdrawal shall be made until a certain number of periodic deposits have been made during a period of not less than three months constitute “time deposits, open account” even though some of the deposits are made within thirty days from the end of such period.

¹⁷ A deposit with respect to which the bank merely reserves the right to require notice of not less than thirty days before any withdrawal is made is not a “time deposit, open account,” within the meaning of the above definition.

¹⁸ Deposits in joint accounts of two or more individuals may be classified as savings deposits if they meet the other requirements of the above definition, but deposits of a partnership operated for profit may not be so classified. Deposits to the credit of an individual of funds in which any beneficial interest is held by a corporation, partnership, association or other organization operated for profit or not operated primarily for religious, philanthropic, charitable, educational, fraternal or other similar purposes may not be classified as savings deposits.

¹⁹ Presentation of a pass book may be made over the counter or through the mails, and payment may be made over the counter, through the mails or otherwise, subject to the limitations of paragraph (2) above as to the person to whom such payment may be made.

The presentation by any officer, agent or employee of the bank of a pass book or a duplicate thereof retained by the bank or by any of its officers, agents or employees is not a presentation of the pass book within the meaning of this regulation except where the pass book is held by the bank as a part of an estate of which the bank is a trustee or other fiduciary, or where the pass book is held by the bank as security for a loan. If a pass book is retained by the bank, it may not be delivered to any person other than the depositor for the purpose of enabling such person to present the pass book in order to make a withdrawal, although the bank may deliver the pass book to a duly authorized agent of the depositor for transmittal to the depositor.

Every withdrawal made upon presentation of a pass book shall be entered in the pass book at the time of the withdrawal, and every other withdrawal shall be entered in the pass book as soon as practicable after the withdrawal is made.

Deposits may be classified according to the nature of the depositor, as well as according to the nature of the deposit. The detailed condition reports of the Federal Deposit Insurance Corporation with respect to commercial banks offer the following classification:

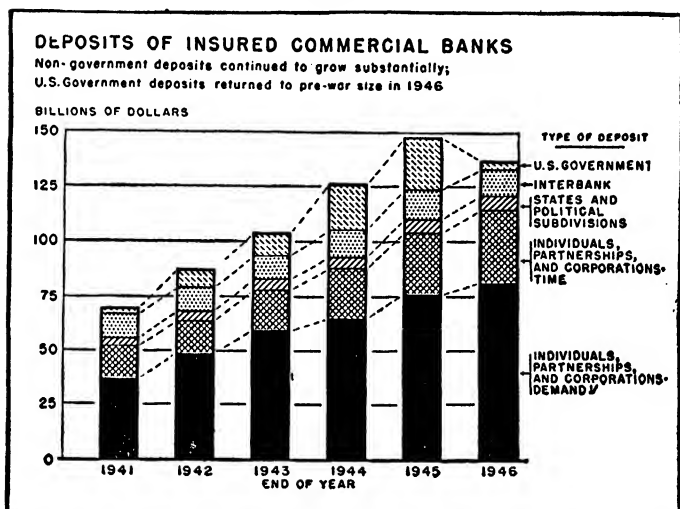
1. Deposits of individuals, partnerships, and corporations
 - (a) Demand
 - (b) Time
2. Certified and officers' checks, cash letters of credit and **travelers' checks** outstanding, and amounts due to Federal Reserve banks.
3. Government deposits
 - (a) United States Government—demand
 - (b) United States Government—time
 - (c) Postal savings
 - (d) States and political subdivisions—demand
 - (e) States and political subdivisions—time
4. Interbank deposits
 - (a) Banks in the United States—demand
 - (b) Banks in the United States—time
 - (c) Banks in foreign countries—demand
 - (d) Banks in foreign countries—time

The relative importance of these various classes of deposits for each of the six years 1941-1946 is shown in the accompanying chart, reproduced from Report 26 of the Federal Deposit Insurance Corporation.

The chart does not show the division into demand and time deposits for United States and other government deposits or for interbank accounts. Except for states and

political subdivisions, which had \$664.5 million of time deposits on December 31, 1946, the amount of time deposits among these groups is of small importance.

CHART 2



¹ Includes certified and officers' checks, letters of credit and travelers' checks sold for cash, and amounts due to Federal Reserve banks

Demand deposits adjusted.—For the purpose of showing the amount of effective check currency in the hands of the public, the Board of Governors publishes a figure called "demand deposits adjusted" for member banks. This figure is arrived at by subtracting from total demand deposits the interbank deposits, U. S. government deposits, and cash items in process of collection of these banks. The resulting figure represents the total of checking deposits not already drawn against in the hands of the public.

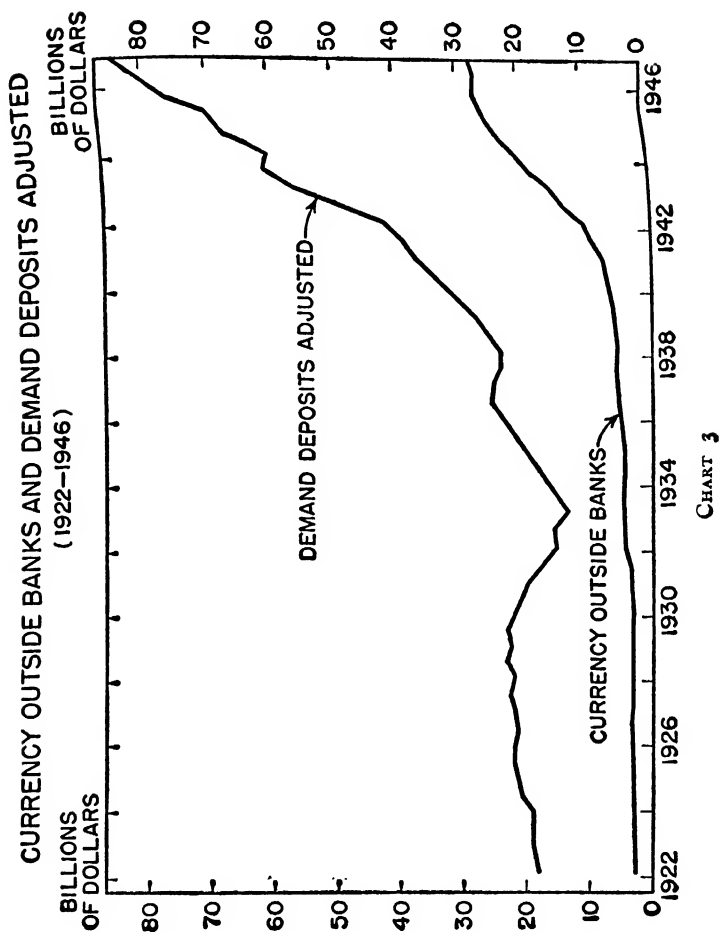
For purposes of indicating the amount of check currency, a more realistic picture would be obtained, in the judgment of the author, if United States deposits were not subtracted from the total along with interbank accounts and cash items in process of collection. The federal government makes a tremendous number of payments by check, and the demand

balances of the Treasury department should be included with business and individual deposits to give an accurate picture.

This is particularly true in wartime. On June 30, 1944, for example, United States deposits in member banks amounted to \$18.7 billion. Since these deposits were being checked against regularly in making government payments, they constituted a definite and important part of the check currency. Had this amount been included in "demand deposits adjusted," the figure for that item on the date mentioned would have been \$77.9 billion instead of \$59.2 billion as reported. In peacetime, when Treasury deposits are more moderate in amount, the omission of government deposits is less significant. Nevertheless, to obtain an accurate picture of the check currency at any time, United States deposits should be included.

Hand-to-hand money and the check currency.—The relation of demand deposits adjusted to the amount of hand-to-hand currency outside the banks and Treasury is shown in the accompanying chart (Chart 3). The most interesting fact to be observed here is the increasing relative importance in the last two decades of hand-to-hand money as compared with the check currency. In December 1929, at the beginning of the great depression, currency outside the banks amounted to a trifle less than 16 per cent of demand deposits adjusted. In December 1940, shortly before our entry into World War II, the ratio had risen to slightly under 21 per cent. In December 1946, a further substantial increase to 32 per cent is indicated. As will be seen from Table 9, the addition of United States deposits to demand deposits adjusted does not appreciably alter these percentages, since Treasury deposits were not abnormally large on any of the three dates referred to.

Since the proportion of hand-to-hand money to check currency doubled between 1929 and 1946, some explanation of the increase in this proportion is called for. A number of reasons for the change may be suggested. For one thing, the great depression was accompanied by a banking crisis of grave proportions, which lead to currency hoarding on a wide scale and a large number of bank failures. In June



MONEY AND BANKING

TABLE 9

DEMAND DEPOSITS ADJUSTED, UNITED STATES GOVERNMENT DEPOSITS,
CURRENCY OUTSIDE BANKS

(Figures partly estimated. Millions of dollars)

End of Month	(1) Demand Deposits Adjusted	(2) United States Government Deposits	(3) Currency Outside Banks	(4) % of (3) to (1)	(5) % of (3) to (1) + (2)
1929—June	22,540	381	3,639	16.3	15.4
Dec.	22,809	158	3,557	15.6	15.5
1933—June	14,411	852	4,761	32.5	31.2
Dec.	15,035	1,016	4,782	31.8	29.8
1937—June	25,198	666	5,489	21.8	21.2
Dec.	23,959	824	5,638	23.6	22.8
1938—June	24,313	599	5,417	22.2	21.8
Dec.	25,986	889	5,775	22.2	21.2
1939—June	27,355	792	6,005	22.0	21.4
Dec.	29,793	846	6,401	21.4	21.2
1940—June	31,962	828	6,699	21.0	20.4
Dec.	34,945	753	7,325	21.0	20.4
1941—June	37,317	753	8,204	22.0	21.6
Dec.	38,992	1,895	9,615	24.6	23.6
1942—June	41,870	1,837	10,936	26.2	25.0
Dec.	48,922	8,402	13,946	28.6	24.4
1943—June	56,039	8,048	15,814	28.2	24.6
Dec.	60,803	10,424	18,837	31.0	26.4
1944—June	60,065	19,506	20,881	34.8	26.2
Dec.	66,930	20,763	23,505	35.2	26.8
1945—June	69,053	24,381	25,097	36.3	26.9
Dec.	75,851	24,608	26,490	35.0	26.4
1946—June	79,476	13,416	26,516	33.4	28.6
Dec.	83,314	3,103	26,730	32.1	31.0

Source: Federal Reserve Bulletin, May 1947, p. 561.

1933, shortly after the culmination of the crisis, currency outside the banks amounted to one-third of demand deposits adjusted. The high proportion of outside currency at that time is easily explained. Bank failures had left many communities without banking facilities and much hoarded money had probably not been returned to the banks for deposit.

With the institution of deposit insurance, however, and restored confidence in the banks, why did not the proportion of outside currency to demand deposits adjusted return to its predepression level? The proportion had, it is true, dropped to approximately 20 per cent by 1940, but then rose sharply to better than 30 per cent in 1946.

In spite of the relative decrease in money outside the banks between 1933 and 1940, the proportion in the latter year was still nearly 33 per cent above that of 1929. Two reasons for this may be suggested. First, the number of banks was much smaller in 1940 than in 1929. At the end of the latter year, there were 24,633 banks and 3,353 branches (June 30, 1929), while at the end of 1940 the number of banks was 14,895, and the number of branches, 3,525. Thus, the number of banking offices had declined by almost 10,000 between the two dates. In many smaller places, banks that had failed during the crisis were not replaced. People in places left without banking facilities were forced either to open accounts in banks at some distance, in which case they would cash fewer and larger checks and their average holding of hand-to-hand currency would increase, or get along without checking accounts and go on a cash basis.

A second reason for the increased relative importance of hand-to-hand money was the service charges instituted by the banks after 1933. Many banks that had not formally levied a service charge on small checking accounts introduced such charges with the result that either a substantial minimum balance had to be maintained or the number of checks drawn had to be sharply reduced in order to avoid service charge payments. Since the average small depositor was not in a position to maintain a substantial balance, he would avoid or minimize the charge by writing fewer checks and making more of his payments with hand-to-hand money.

The large increase in the proportion of hand-to-hand money to check currency that occurred between 1940 and 1946 is to be explained largely by the war. There were many shifts of laborers to new areas and it doubtless did not seem worth while to most of these individuals to establish new banking connections in locations where the jobs were "for

the duration," so that another shift would probably have to be made at the end of the war. Then, again, servicemen in this country used hand-to-hand money largely and substantial amounts were carried to other countries in the course of the war.

The most important reason for the wartime increase in the proportion of outside money to check currency was hoarding, particularly by black market operators, income tax evaders, and foreigners. The first two groups (many in the second group belonging also in the first) had, of necessity, to hold their illicit gains in the form of hand-to-hand money, and the sum thus held was undoubtedly very large.

What will develop in the future is problematical. Unless there is a substantial increase in the number of banking offices and a decrease in service charges, neither of which seems likely, a decline in the proportion of hand-to-hand money below the 1940 level seems unlikely, and a decline even to that level may not occur for some time.

Number of payments and volume of payments.—It should be emphasized that the large increase in the proportion of outside currency to demand deposits adjusted does not connote a similar increase in the dollar volume of payments made with hand-to-hand money. Large payments, as well as many smaller ones, continue to be made by check, while the payments made with hand-to-hand currency are for small dollar amounts, although large in number. Moreover, it is highly probable that the velocity of turnover or circulation of hand-to-hand currency is considerably less than formerly, as a result of larger average holdings of pocket money by a large group of the population. We may feel fairly confident, therefore, that the proportion of dollar payments made by check has not been greatly reduced.

Conclusion.—In this and the preceding chapter, we have been concerned with the two major types of bank liabilities, bank notes and deposits. The three chapters that follow will be devoted to the more important bank assets. Taking these in order of their liquidity, we shall discuss first, primary reserves; second, secondary reserves; and, finally, the banks' major earning assets: loans, discounts, and investments.

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CHAPTER 13

COMMERCIAL BANK RESERVES

Introduction.—For many years it has been the practice in the United States to require by law the maintenance of minimum reserves against deposits by the banks. In most foreign countries, on the other hand, the size of the reserves maintained has been left to the discretion of the bankers who have governed their actions in this regard both by custom and tradition and their own conclusion as to what portion of their assets should be held in the form of reserves. In the following discussion we shall, for the most part, be concerned with the factors that should govern the size of reserves quite apart from any legal requirements since laws on the subject are apt to be arbitrary to a considerable extent.

PRIMARY RESERVES

The theory of reserves.—Theoretically, reserves against deposits are conceived of as funds of cash or its equivalent that have the purpose of meeting the demands of depositors who wish to withdraw their deposits. From the point of view of the individual banker, then, a reserve is a fund designed to insure his solvency, and, unless otherwise restricted by law in the matter, the banker will keep that amount which custom, experience, and wisdom have shown to be necessary for the purpose.

What constitutes the amount necessary to be held as reserve depends upon a number of factors. In the first place, the number of depositors is important. If a bank had only one depositor, who might withdraw his entire deposit on demand, it is obvious that no smaller reserve than 100 per cent of the deposit would be adequate to insure the solvency of the bank. As the number of depositors increases, however, deposits and withdrawals tend more and more to offset each other, so that a large bank with many thousands of

depositors needs, other things being equal, a smaller proportional reserve than does the small bank with but few depositors.

A second factor affecting the size of the reserve to be held against deposits is the nature of the business of the bank's customers. If the latter are chiefly engaged in one particular line of trade, and if that line of trade is subjected to marked seasonal influences, then there will be times of the year when the withdrawals greatly exceed the deposits, and the bank will have to keep a reserve on hand at such times to meet the seasonal requirements of its customers. Generally speaking, then, the greater the diversity of business of a bank's customers, the smaller the proportional reserve it is necessary to maintain, as the seasonal demands of its various customers will be spread throughout the year, the deposits of some business enterprises tending to offset the withdrawals of others. This illustrates one advantage of a system of branch banks over a unit banking system. The customers of a large bank with widely scattered branches will almost certainly be engaged in a wide variety of occupations, so that a heavy demand for funds by customers in a given region may be met by the transfer of funds from some other section where the demand is slack.

Thirdly, the type of deposit plays an important part in determining the size of the reserve to be held against it. It should be clear that a smaller reserve may safely be maintained against savings or time deposits than is necessary against demand deposits. The former, being for the most part accumulated by individuals with the idea of permanent investment in mind, have a comparatively slow turnover and do not require a very large reserve, while the latter are much less stable, so that a higher reserve is necessary.

Fourthly, with respect to reserves against demand deposits, the liquidity of the bank's loans and investments is significant in relation to the size of the reserve that must be held. This question of liquidity will be considered in the following chapter, so that it need only be pointed out here that the more liquid the loans and investments of a bank, the smaller the reserve it will be necessary to maintain against deposits payable on demand.

Fifthly, it should be noted that the regularity of activity of a bank's demand deposits is a determining factor in the size of the reserve to be held. The deposits may be very active, but if withdrawals and deposits are made with a predictable degree of regularity, the banker will not need to keep as high a reserve as when the size and number of withdrawals are highly irregular.

Lastly, the organization of the reserves of a banking system exerts a significant influence on the size of the reserve that may safely be held by the individual banks of the system. If the reserves are in large part deposited in a central reservoir (such as a central bank) under unified control, they may be utilized much more efficiently than if scattered throughout the vaults of the individual banks. The mere pooling of reserves in the central bank has two advantages. First, the reserves may be used where most needed as in a large branch bank system; and second, through the development of a unified system of check clearing and collection, the cancellation of checks through the clearing process may be carried through for the country as a whole with an attendant diminution of the amount of actual cash reserve necessary for the settlement of clearing balances. When, in addition, the central bank is permitted to extend its own credit on the basis of these deposited reserves, a still greater efficiency in their use is effected.

Proportional reserves.—It should, of course, be realized that when large or small reserves are mentioned, the terms are used in relation to deposits, not in any absolute sense. In other words, it is the reserve ratio (the ratio of reserves to deposits) that is important. The actual number of dollars in the reserve is of no especial significance apart from the amount of deposits against which the reserve is held. When speaking of the size of reserves, therefore, it will be understood that the reserve ratio rather than the actual amount is referred to, unless otherwise specifically stated.

Methods of changing the reserve ratio.—Since the reserve ratio represents a certain proportion of deposits, it is clear that it can be altered by a change either in the amount of the reserve or in the amount of deposits. If, then, the reserve ratio of a given bank is deemed to be too low, it can

be raised through increasing the bank's reserve cash or balances or through decreasing its deposits. There are several ways in which one or both of these changes may be effected.

First, an increase in the bank's cash deposits will increase the ratio. As the deposits rise, the reserve also increases by a like amount, and since the reserve constitutes but a fractional part of the deposits, an increase in the latter will raise the reserve more than proportionally. Second, the reserve ratio may be raised by a contraction of loans on the part of the bank. As outstanding loans mature and are paid, either the bank's cash will be increased—as when the loans are repaid in cash or in checks on other banks—or its deposits will be decreased—as is the case when the borrower draws a check against his own account in the bank to repay his loan. Third, the reserve ratio may be increased by the sale of investments for cash or reserve funds by the bank. Lastly, it may be possible to build up the ratio by borrowing from another bank.

It need only be stated that the reserve ratio may be lowered when too high by the reverse of any of the preceding methods. The withdrawal of deposits, the expansion of loans, the purchase of investments, or the repayment of a loan to another bank will serve, singly or in combination, to reduce an overly large reserve to the desired proportion of deposits.

Not all of the methods mentioned, whereby the reserve ratio may be altered, are in the direct control of the banker. He is not able either to acquire cash deposits or to prevent withdrawals at will. Theoretically it should be possible for him to contract his loans whenever necessary or desirable. As a practical matter, however, it is often inexpedient for the banker to contract loans at the time when his reserve most needs to be replenished. The expansion of loans, on the other hand, depends entirely upon the demand of the bank's customers for credit, not on the desire of the banker in the matter.

We may conclude, therefore, that the conscious control of the reserve ratio can be effected by the individual banker chiefly through the sale and purchase of investments or through the borrowing of reserve funds from some other

bank and by the repayment of such loans. Where the individual banks are in a position to obtain loans from the central bank at practically any time, as in the United States, the latter method is likely to be the one most frequently resorted to in adjusting the reserve position. Nevertheless, it is not desirable to depend entirely on this method. There are many occasions upon which it is more expedient or more profitable to bring about the desired adjustment by the sale or purchase of open market investments than by borrowing or repaying funds at the reserve banks. Consequently, it is desirable for a bank to deal in the open market to some extent. The investment of funds in open market securities constitutes a way to turn idle excess reserves into earning assets when customers' demand for credit is slack, and, at the same time, to build up a secondary reserve of readily salable investments that may be liquidated when it becomes necessary to increase the bank's primary reserve in time of need.

Primary and secondary reserves.—It has already been noted that one of the factors affecting the size of the reserve that a bank finds it necessary to maintain against its deposits is the liquidity of its loans and investments. So important is that particular group of loans and investments that can be turned into cash at will because of their liquidity or marketability that it is commonly referred to as a secondary reserve. The whole question of secondary reserves will receive attention in the following chapter. For the present, we are concerned with the subject merely because the possession of secondary reserves by a bank gives the banker a measure of direct control over his reserve ratio, which would otherwise be lacking.

What constitutes primary reserves.—It may have been inferred from the foregoing discussion that primary reserves consist solely of cash in the possession of the bank. While it is true that cash in vault does constitute a portion of any bank's primary reserve, free balances payable on demand and held on deposit with other banks must also be included under this head. The purpose of a reserve against deposits, which is to pay depositors who wish to withdraw their funds from the bank, may often better be served by means of a balance in another bank than by means of cash held in the bank's own

vaults. A customer who wishes to make a payment in New York, for example, may easily find it more convenient to exchange his deposit for a New York draft than to withdraw it from the bank in cash. The balance in a New York bank, against which the draft is drawn, acts quite as much in the capacity of a primary reserve as does cash in the bank's own vault when used to cash a local check. Again, when banks generally maintain deposits in the central bank, drafts drawn against these balances may be used to remit for checks sent in to it for payment or to pay adverse clearing house balances more conveniently than could cash itself.

In some instances banks receive interest on balances held with other institutions. When this is the case, such balances constitute investments as well as reserves and may be maintained at larger figures than would be held if no income were derived from them. So long, however, as they act as reserves in meeting the claims of depositors, bankers' balances may reasonably be included, along with cash in vault, in the category of primary reserves.

Legal vs. working reserves.—A distinction of significance, especially in the United States, is one between legal and working reserves. Since the middle of the last century the practice of requiring a minimum legal reserve has been generally followed in this country, as a result, doubtless, of our system of widely scattered and often very small unit banks. Obviously, the legal requirement sets a lower limit to the size of the primary reserve that any given bank must keep; but it is frequently desirable, or even essential, that some margin above the legal limit be maintained. Consequently, the actual primary reserve, which may be termed the "working reserve" of the bank, is likely to be somewhat above the legal requirement. In discussing the question of reserves in the United States, emphasis is apt to be placed on the legal requirements rather than on the working reserves of the banks. Fundamentally, of course, the latter are more important than the former as depicting the real reserve situation in the country.

Reserves in the United States.—The unsatisfactory reserve situation under the national banking system has already received attention (Chap. 8). In the following section of

the chapter, we shall consider the changes introduced by the Federal Reserve Act and discuss existing reserve requirements of member banks in the United States.

RESERVES UNDER THE FEDERAL RESERVE SYSTEM

The transition period.—The Federal Reserve Act was designed, among other things, to eliminate the defective reserve arrangements that had prevailed under the national banking system. Under the original act, reserve requirements were reduced for each class of banks, and the reserves were to be kept partly in cash in the banks' own vaults and partly with the Federal Reserve banks in the proportions indicated in the accompanying table. In order not to disturb existing

Banks located in	Against demand deposits				Against time deposits per cent
	Total per cent	Proportion required to be held in			
		(1) Own vaults	(2) Fed. Res. Bk.	(3) Either (1) or (2)	
Central reserve cities.....	18	6/18	7/18	5/18	5
Reserve cities..	15	5/15	6/15	4/15	5
All other.....	12	4/12	5/12	3/12	5

conditions too suddenly, a period of three years was allowed in which the transfer of reserve balances from correspondents to the Federal Reserve banks might be effected.

The amendment of 1917.—The banking system was not destined to test the effectiveness of the original Federal Reserve regulations that divided the final reserves of the country between the member institutions and the Federal Reserve banks. Before the three-year transition period had elapsed, the amendment of June 21, 1917, again changed the requirements. Legal reserves were lowered to 13, 10, and 7 per cent of demand deposits for central reserve city, reserve city, and country banks respectively, and 3 per cent of time deposits for all classes of banks. In addition, all legal reserves were required to be kept in the form of deposits with the Federal Reserve banks.

Reduction in working reserves.—This marked reduction in legal reserve requirements did not bring with it a cor-

responding decrease in working reserves for two reasons. First, cash in vault, which is an essential part of every bank's working reserve, could not be counted as legal reserve under the 1917 amendment. Secondly, the banks would still find it necessary or desirable to maintain some balance with other

TABLE 10
REDUCTION IN WORKING RESERVES PER CENT OF GROSS DEPOSITS
NATIONAL BANKS

	<i>Central Reserve City Banks</i>		<i>Reserve City Banks</i>		<i>Country Banks</i>	
	1909-1913	1922-1923	1909-1913	1922-1923	1909-1913	1922-1923
Cash on hand.....	20.4	1.4	11.4	1.7	7.9	2.7
Due from other banks...	9.6	2.7	24.5	9.9	18.6	8.8
Balances and items in process of collection with Federal reserve banks...	....	12.8	....	12.1	....	6.1
<i>Total as above</i>	30.0	16.9	35.9	23.7	26.5	17.6
Reduction in reserves maintained.....	13.1		12.2		8.9	

NATIONAL AND STATE BANKS					
	<i>June 30, 1914</i>		<i>June 30, 1922</i>		
	<i>National Banks</i>	<i>State Banks</i>	<i>National Banks</i>	<i>State Banks</i>	
				<i>Members</i>	<i>Non- members</i>
Cash.....	11.9	6.7	2.0	1.5	3.3
Due from banks.....	16.2	14.8	7.6	4.4	12.7
Reserve with Federal re- serve banks.....	....	....	7.0	7.4	....
Items in Process of Collec- tion with Federal reserve banks.....	....	....	2.2	1.5	....
<i>Total reserve</i>	28.1	21.5	18.8	14.8	16.0

banks than the Federal Reserve banks, but such balances were, along with cash, excluded from legally required reserve. Nevertheless, working reserves were considerably lessened as a result of the changed legal requirements. Table 10, adapted from an analysis of reserve requirements by Mr. George J. Seay, Governor of the Federal Reserve Bank of Richmond,¹ will serve to show the real change in the

¹ This analysis was published in 1925 by the Federal Reserve Bank of Richmond in connection with a series of letters to college classes in economics and banking on *The Practical Operations of the Federal Reserve System*. Part of the analysis was contained in Letter 18, part in supplementary studies.

ratio of working reserves to gross deposits that was effected under the operation of the Federal Reserve System.

Earlier defects eliminated.—It was possible to accomplish the reduction in reserves just described and, at the same time, to increase the efficiency and safety of the banking system by removing the defects that had prevailed prior to 1914. Reserves are now concentrated, not in the commercial banks of New York City, but in the twelve Federal Reserve banks. The latter are essentially non-profit-making institutions, may not pay interest on deposits, are required to keep large cash reserves, and are so hedged around with restrictions as to insure the liquidity of their loans and investments. They are thus much better suited to act as reserve agents than were the New York banks in earlier years.

The reasons for the unduly large working reserves under the national banking system have been removed in part. The present system of clearing and collection has removed the necessity for the maintenance of a large number of correspondent accounts and of large compensating balances. The fact that correspondent balances are still fairly large, although relatively smaller than under the old system, is to be explained in several ways. Even at present non-member banks must collect out-of-town checks through correspondents and have to maintain balances for this reason. Furthermore, a number of member banks collect through correspondents by preference instead of using the Reserve bank facilities directly. Again, there is still a need for balances in New York to meet the demands of customers for New York drafts and to provide foreign exchange connections—not furnished by the Reserve banks—for interior banks. Finally, prior to 1933 the payment of interest by correspondents made it seem desirable to keep the smallest possible deposit with the Reserve banks in order to earn the interest on surplus reserve funds deposited with correspondents. Balances with correspondents accordingly persist, but are of relatively much less significance than formerly.

The fictitious element has been largely eliminated from the reserves of member banks since checks in the process of

collection can no longer be counted as part of the legally required reserve. While member bank reserve requirements are as rigid as ever, the ability to build up reserves by borrowing at the Reserve banks eliminates almost entirely the evil effects of this rigidity.

Perhaps more important than any of these other factors is the fact that the banking reserves of the country are now under centralized control. Each Federal Reserve bank holds the final reserves for its district, while the reserves of the different Federal Reserve banks have been mobilized by the provision that the Federal Reserve Board may require these banks to lend to one another in time of stress, thereby equalizing the reserves for the country as a whole. In addition, the Board of Governors is empowered to suspend any reserve requirement of the Federal Reserve Act in time of emergency, so that reserves may be used if needed as they could not be under the old system.

Existing defects.—In spite of the far-reaching improvements that the Federal Reserve System has wrought in the organization of reserves in the United States, there remain certain defects that should be eliminated. Of chief importance among these is the method of basing the legal reserve required on the location of the banks. The old classification of central reserve city, reserve city, and country banks, while possessing a certain significance under the earlier system, became meaningless when carried over into the Federal Reserve Act. St. Louis was reclassified as a reserve city, effective July 1, 1922, and since that date there have been but two central reserve cities, New York and Chicago. The number of reserve cities is about 60, and banks located elsewhere are known as country banks. Yet many of the latter group are not only larger banks but are located in larger cities than are some of the institutions of the reserve city group. In like manner, some of the larger reserve city banks are equal in importance to at least a few of the banks located in New York and Chicago. Moreover, the type of business done by different banks throughout the country does not vary uniformly with their location by any means. It seems obvious, therefore, that the present grouping of banks for the determination of re-

serve requirements is illogical and, in many instances, unjust, and that the situation should be remedied by the adoption of some other method of determining required reserves.

The Reserve Committee proposal.—The matter of reserve requirements had been for some time under the consideration of a committee, appointed by the Federal Reserve Board and known as the Committee on Bank Reserves of the Federal Reserve System.² In November 1931, the report of this committee was released for publication. Although Congress failed to adopt the suggestions of the committee, the report contained such significant recommendations for alterations in the method of determining member bank reserves that it is worthy of somewhat extended consideration. Accordingly, it seems highly desirable to include at this point those passages from the report that contain a summary of the committee's recommendations:

Defects of present reserve requirements.—In the opinion of the committee, our present system of legal requirements for member bank reserves has never functioned effectively since its inception in 1914. It has not operated to relate the expansion of member bank credit to the needs of trade and industry, nor has it adequately reflected changes in the volume and activity of member bank credit. Furthermore, the committee also finds that present requirements for reserves are inequitable and unfair as between individual member banks and groups of member banks and do not adequately take into account genuine differences in the character of banking in which a member bank may be engaged.

The committee takes the position that it is no longer the primary function of legal reserve requirements to assure or preserve the liquidity of the individual member bank. The maintenance of liquidity is necessarily the responsibility of bank management and is achieved by the individual bank when an adequate proportion of its portfolio consists of assets that can be readily converted into cash. Since the establishment of the Federal reserve system, the liquidity of an individual bank is more adequately safeguarded by the presence of the Federal reserve banks, which were organized for the purpose, among others, of increasing the liquidity of member banks by providing for the rediscount of their eligible paper, than by the possession of legal reserves. The two main functions of legal requirements for member bank reserves under our present banking structure are, first, to operate in the direction of sound credit conditions by exerting an influence

² The members of the committee consisted of E. L. Smead, Ira Clerk, M. J. Fleming, E. A. Goldenweiser, L. R. Rounds, and W. W. Riefiler, Executive Secretary. The paragraphs that follow are quoted directly from the report of this committee as published by the Federal Reserve Board "for the information of member banks of the system and others interested in the subject."

on changes in the volume of bank credit, and, secondly, to provide the Federal reserve banks with sufficient resources to enable them to pursue an effective banking and credit policy. Since the volume of member bank credit needed to meet the legitimate needs of trade and industry depends on the rate at which credit is being used as well as on its aggregate amount, it is essential for the exercise of a sound control that legal requirements differentiate in operation between highly active deposits and deposits of a less active character. Requirements for reserves should also be equitable in their incidence, simple in administration, and, so far as possible, not susceptible of abuse.

Similar principles underlie the present reserve law, which in requiring lower reserves against time deposits than against demand deposits, and lower reserves against the demand deposits of country banks than against the demand deposits of reserve and central reserve city banks may have been expected to impose higher reserves on more active deposits than on less active deposits. Notwithstanding the fact, however, that existing requirements would appear to be so arranged as to make reserve requirements vary with the volume and activity of deposits, experience shows that since 1914 and especially since 1922 the proportion of primary reserves held by member banks has steadily declined in relation to the volume of member bank deposits and to their activity.

This outcome has been the result of defects in the definition of reserves, in the method of determining liabilities against which reserves must be carried, and in the classification of banks and of deposits for reserve purposes. The exclusion of vault cash from required reserves of member banks in 1917 has been followed by a reduction in the vault cash holdings of some city banks to a minimum; the rule that amounts due from banks may be deducted only from amounts due to banks has tended to decrease reserves in times of business activity and to increase reserves in times of depression, and the establishment of a low reserve against time deposits in 1914 has facilitated the growth of bank credit without a corresponding growth in reserves. Even if these particular defects in the present system of reserves had not existed, however, the rapid increase in the turnover of demand deposits which has occurred in recent years would still have tended to prevent reserve requirements from increasing in proportion to the growth in the effective use of credit by the customers of member banks.

Proposals of the committee.—Before deciding to recommend fundamental changes looking toward the establishment of a new basis for calculating required reserves, the committee made every effort to frame provisions designed to correct the existing situation through modifications in the classification of cities for reserve purposes and in the classification of deposits subject to reserve, including a more stringent definition of time deposits. As these proposals were studied, however, it became more and more evident that they would not be effective and that an entirely new approach to the reserve problem was necessary.

The committee proposes, consequently, to abolish completely the classification of deposits into time and demand deposits, and the classification of member banks according to their location, into central reserve city

banks, reserve city banks, and country banks. Instead, the committee recommends that all member banks and all deposits be treated alike for reserve purposes, and that the formula used in calculating reserve requirements take into account directly, instead of indirectly as in the existing law, the activity as well as the volume of the deposits held by each individual member bank, without regard to the location of the bank or the terms of withdrawal on which the deposits are technically held. To accomplish this, the committee proposes that each member bank be required to hold a reserve equivalent to (a) 5 per cent of its total net deposits, plus (b) 50 per cent of the average daily withdrawals actually made from all of its deposit accounts. These withdrawals, which are shown by debit entries on the books of member banks, are the only real test of the activity of a deposit account and furnish the only basis by which that activity can be equitably and effectively reflected in requirements for reserves. Under this proposal, therefore, each deposit will carry a total reserve based on its activity as well as on its amount. A totally inactive deposit will carry a total reserve of only 5 per cent, while a deposit balance which is checked out on the average once a week will carry a total reserve equivalent to 12 per cent of its amount. For the average member bank the total reserve under the proposed formula will be equivalent to about 8 per cent of its deposits. To prevent this formula from imposing too great a burden in extreme cases, the recommendations of the committee also provide that in no case shall the aggregate reserve required of a bank exceed 15 per cent of its gross deposits.

The committee proposes to include in legal reserves, in addition to the funds which member banks have on deposit with their Federal reserve bank, their vault cash, with certain limitations, as both classes of funds contribute to the strength of the reserve banks and have a direct effect on the reserve system's control of changes in member bank credit. It proposes also to place country member banks on a parity with city banks with respect to deductions from deposit accounts by permitting banks in calculating net deposits subject to reserve to deduct balances due from member banks and items in process of collection from total deposits instead of from balances due to banks alone, as is the practice at present.

Criticism of committee's proposal.—Although the foregoing proposal of the Committee on Bank Reserves was generally received with favor, it has been subject to criticism in some quarters. One major objection, which would seem to be valid in the light of the theory of reserves presented earlier in the chapter, is that regularity of withdrawals, rather than velocity of turnover, is the proper criterion for determining the size of reserves that banks should maintain against their deposits. Another pertinent criticism is that the Committee's proposal makes no allowance for varying degrees of liquidity in the earning assets of different mem-

ber banks, although it is incontrovertible that a bank with liquid assets requires a smaller reserve than one with slow loans and investments.

As far as these objections are concerned, however, it may be pointed out that it would be almost impossible to fix by law any general reserve requirements that could take into account varying degrees of regularity of deposit withdrawals or of liquidity of assets in various member banks. No reserve requirement applicable to all member banks is going to prove entirely satisfactory for every institution.

Moreover, it is true that *changes*, particularly *increases*, in velocity in any bank or in the banks of any section almost always indicate changes or increases in speculative activity. The Committee frankly admits that one of the major aims of the proposal is to give an indication to the Reserve banks of the development of speculative activity and thereby assist those banks to control credit expansion when such developments occur. The facts that the proposed plan would be valuable in this respect and would eliminate existing defects make the adoption of this or some similar plan desirable. Short of doing away with legal requirements altogether, the Committee's proposal seems to meet the needs of the situation in more satisfactory fashion than other suggestions that have been offered.

Renewal of recommendations.—The recommendations of the Committee on Bank Reserves were shortly transmitted to Congress by the Federal Reserve Board, but no action was taken to incorporate them in the Federal Reserve Act, no change in the then existing reserve requirements being included in the Banking Act of 1933. On March 23, 1934, Governor Black of the Federal Reserve Board renewed these recommendations on behalf of the Board as an amendment to the bill regulating the security exchanges. In spite of Governor Black's forceful statement in this connection, no action was taken by Congress to include the proposed plan in the security exchange bill.

Increases in reserve requirements.—The Banking Act of 1935 incorporated two minor suggestions contained in the report of the Committee on Bank Reserves, but again ignored the major recommendation that reserves should be based on

volume and velocity of deposits. This act did provide, however, that the Board of Governors might raise existing requirements to no more than twice their level at the time of passage of the act. As a result of huge gold imports, due to the undervaluation of the dollar, member bank reserves became so excessive that the Board of Governors took advantage of their newly acquired power to increase required reserves. On July 14, 1936, the Board increased reserve requirements on all classes of member bank deposits 50 per cent, effective August 15, 1936. The gold inflow continuing, however, this did not prove to be sufficient, and on January 31, 1937, the Board of Governors announced another increase of $33\frac{1}{3}$ per cent, which would bring requirements up to the limit fixed by the Banking Act of 1935. Half of this increase went into effect on March 1, 1937, and the other half on May 1st. As a result, required reserves were 26 per cent against demand deposits for the member banks in central reserve cities, 20 per cent in reserve cities, and 14 per cent for country banks, with a requirement of 6 per cent against time deposits in all classes of banks. As a result of the severe slump in business that began in the fall of 1937, the Board of Governors, in the spring of 1938, announced a reduction in required reserves, effective April 16th, in spite of the fact that excess reserves stood at over \$1,700,000,000 at that time. Required reserves were thus reduced to $22\frac{3}{4}$ per cent against demand deposits for central reserve city banks, $17\frac{1}{2}$ per cent for reserve city banks and 12 per cent for country banks, with a requirement of 5 per cent against time deposits for all member banks. On November 1, 1941, reserve requirements were again raised to the full limit permitted by law, excess reserves being estimated at \$4.5 billion at the end of October.

Shortly after the last-mentioned increase, the United States formally entered World War II. As the war progressed, excess reserves declined, the decline going so far in some banks, especially in the central reserve cities, as to wipe out excess reserves entirely and require these banks to obtain funds from their Federal Reserve banks. In order to permit this particular group of banks to be relieved of pressure, while not affecting the remaining banks of the

system, Congress, on July 7, 1942, amended the provisions of the Federal Reserve Act to permit the Board of Governors to change the reserves required to be maintained against demand or time deposits or both "(1) by member banks in central reserve cities or (2) by member banks in reserve cities or by member banks not in reserve or central reserve cities" as well as by all member banks.

Under the law, as thus amended, the Board of Governors, in three successive steps, reduced the reserve required of central reserve city banks to be held against demand deposits from 26 to 20 per cent, the same requirement as for reserve city banks. Present (1947) reserve requirements, as well as previous requirements that have been in effect from time to time, are presented in tabular form below.

TABLE II
MEMBER BANK RESERVE REQUIREMENTS
(Per cent of deposits)

Period in effect	Net demand deposits			Time deposits (all member banks)
	Central reserve city banks	Reserve city banks	Country banks	
June 21, 1917-Aug. 15, 1936	13	10	7	3
Aug. 16, 1936-Feb. 28, 1937	19½	15	10½	4½
Mar. 1, 1937-Apr. 30, 1937	22¾	17½	12¼	5¼
May 1, 1937-Apr. 15, 1938	26	20	14	6
Apr. 16, 1938-Oct. 31, 1941	22¾	17½	12	5
Nov. 1, 1941-Aug. 19, 1942	26	20	14	6
Aug. 20, 1942-Sept. 13, 1942	24	20	14	6
Sept. 14, 1942-Oct. 2, 1942	22	20	14	6
Oct. 3, 1942 and after	20	20	14	6

Source: *Federal Reserve Bulletin*, May 1947.

It should be noted that the right to alter reserve requirements, as granted to the Board of Governors, is purely a device for controlling the limits of bank credit expansion. The original purpose of reserves, the maintenance of convertibility, appears to be no longer a matter of primary consideration. This change in emphasis was perhaps to be ex-

pected with the establishment of the Federal Reserve banks, where member banks could augment their reserves by discounting eligible paper. In any event, the point is worth noting. The usefulness of the device as an instrument of control will be considered in a later chapter in some detail.

As compared with the earlier recommendations of the Committee on Bank Reserves, the provisions of the Banking Act of 1935 (as amended in 1942) are inferior as a long-run proposition. While it may be argued that existing provisions permit a fairly high degree of flexibility in reserve requirements, arbitrary alterations in requirements by the Board of Governors are disturbing to the banks and are apt to be less scientific than the semiautomatic changes that would have taken place under the Committee's proposed plan. In view of the large volume of excess reserves existing in 1935, it might have been advisable to fix a higher basic minimum than the Committee's recommended 5 per cent, but this could have been done while still retaining the principle underlying the Committee's proposal.

The Banking Act of 1935 also failed to alter the outmoded provision of dividing the country's banks, for reserve purposes, into three groups according to their location. The amendment of 1942, which allowed the Board of Governors to alter requirements for one group of banks, irrespective of the others, was in the right direction, but makes no provisions for distinguishing between banks in the same group, and also leaves the decision on changes up to the arbitrary judgment of the Board of Governors—two drawbacks that the Committee's proposal would have avoided.

The reference to "arbitrary" decisions of the Board in the preceding paragraphs is not intended to be critical of the past, present, or any future Board. It seems doubtful to the author, however, if any politically appointed Board could be expected to have the insight and judgment to make the proper decision at the proper time, no matter how excellent might be its intentions.

Conclusion.—The preceding discussion has shown that the reserve organization in the United States is superior to that existing prior to 1914, although not wholly satisfactory. The rigidity of reserves that existed under the national banking

system has been eliminated by the power to discount paper at the Federal Reserve banks, while the right of these institutions to buy and sell certain securities and paper in the open market has enabled them to pump funds into and out of the market as deemed necessary in the best interests of the banking system. Before considering the discount and open market operations of the Reserve banks, however, attention will be directed to the earnings assets of the commercial banks. Most liquid among these are the banks' secondary reserves, which will furnish the subject matter of the next chapter.

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CHAPTER 14

SECONDARY RESERVES—THE MONEY MARKET IN THE UNITED STATES

The need for secondary reserves.—In discussing primary reserves it was pointed out that the size of the reserve a bank should maintain depends in some measure on the maintenance of secondary reserves of liquid investments. To the extent that a bank holds paper or securities that may be turned into cash without undue sacrifice in time of need, it may safely conduct its business with a smaller primary reserve than would otherwise be desirable. Since a primary reserve represents largely idle or non-earning assets, it is clearly to the advantage of the banker to keep it at the lowest figure compatible with safety. A well-selected secondary reserve portfolio is essential to the attainment of this end.

The question of liquidity.—Liquidity is an extremely important concept in the study of commercial banking and, since its importance is greatest in connection with the selection of secondary reserves, it will be advisable to consider various aspects of the subject before proceeding further with a discussion of secondary reserve investments.

Liquidity of a bank asset, as already implied, means the *ability to turn the asset into cash quickly with little or no loss*. Almost any sound asset may be turned into cash without substantial loss if ample time is allowed for the transaction. Likewise, practically any sound asset may be turned into cash quickly if the banker is willing to sacrifice it at whatever price he can obtain. Neither of these alternatives is satisfactory with respect to secondary reserves. The banker wants his cash quickly, but needless to say, he wishes to obtain full value for the assets he decides to liquidate.

From the point of view of the individual banker, it is a matter of indifference where the cash he obtains comes from. If he can sell bonds or transfer loans to another bank, such

assets rightly seem liquid to him. From the standpoint of the banking system, on the other hand, the transfer of an asset from one bank to another does not represent liquidation, for the system is still carrying the asset, although the bank originally holding it is not. In order to have this distinction clearly in mind, we may say that assets that can be transferred readily from one bank to another have the characteristic of shiftability, while assets that can be liquidated outside the banking system are really liquid.

Truly liquid assets consist almost exclusively of self-liquidating paper, by which is meant *paper arising out of loans the proceeds of which are used to assist in the production and/or distribution of goods, the sale of the goods furnishing the funds to repay the loan at maturity*. Such loans are in the nature of the case usually of a comparatively short duration. In many branches of distribution a loan of thirty or sixty days is of ample maturity to cover the period required for marketing the goods, while loans to manufacturers for the purpose of aiding in the production of goods do not ordinarily require a maturity of more than from three to six months. In agricultural production, on the other hand, loans of somewhat longer duration are required—running as long as three years in the growing and marketing of live-stock—and it has been deemed desirable to set up a special type of credit institution to take care of the longer needs of certain types of agriculture. With relatively few exceptions, however, loans of a self-liquidating nature are of fairly short maturity.

As an illustration of an asset that possesses shiftability rather than real liquidity, consider the call loan secured by stock and bonds as granted to brokers on the New York stock market. Such loans mature at the will of the lender (or borrower) and hence have the appearance of great liquidity. Actually they are not really liquid. If one bank calls some of its loans, they will ordinarily be shifted to another bank, but the loans are still carried by the banking system. If all the New York banks wish to call loans, the shiftability of this type of asset disappears. Theoretically, the bankers can sell the collateral security behind the loans under such conditions, but in practice this results in such a rapid decline in

security prices, because of the concerted sales, that the banker would lose heavily by forcing the liquidation of the collateral.

Bonds present a similar situation. Bonds that are traded in actively on an organized market may be sold for cash at once at current prices. If the bonds are sold to real investors—individuals, savings banks, insurance companies, etc.—who buy them outright, they are really liquid. If, however, they are purchased by other commercial banks or with funds borrowed from such banks, the burden is merely shifted from the bank disposing of the bonds to other banks in the system.

In either case, the bank selling the bonds may suffer a loss if the market price at the time of sale is less than was paid originally by the bank. In the case of a commercial loan, recovery of the face amount of the loan depends upon its soundness. What will be obtained from the sale of bonds, on the other hand, depends upon the market for the bonds at the time of sale, not upon the soundness of the issue.

If commercial paper is strictly self-liquidating and if the banker is certain of payment on the maturity date without any renewal, it makes an excellent secondary reserve in spite of the fact that a sizeable proportion of the notes or acceptances held may have a maturity of from ninety days to six months. By purchasing paper with a variety of maturity dates so that some paper is maturing each day, the banker is assured of a regular inflow of cash. If he has no immediate need for the additional cash, he may purchase new paper of a similar type. Should it prove necessary to strengthen his cash or reserve position, however, this end may be attained by refraining from replacing maturing paper in his portfolio.

Marketability plus liquidity.—It has been shown that self-liquidating paper may be made to serve satisfactorily as a secondary reserve, provided that the banker can make a proper selection of maturity dates and can be assured that the paper will not have to be renewed. In granting loans, even of the self-liquidating type, to his own customers, the banker is not always in a position to attain these ends. The bulk of his borrowers may need their loans at about the same time, particularly if their business is seasonal, and the banker

will have to accommodate them. Moreover, if some of them wish to renew their loans, the banker will feel more or less obligated to accede to their requests. Consequently, when commercial paper is acquired for secondary reserve purposes, it is commonly purchased in the open market.

Open markets for self-liquidating paper in the form of bankers' acceptances exist in the leading financial centers of the world. They are made up of sellers, buyers, and groups of specialized dealers. The sellers of the paper are of course those who are using the funds for productive purposes, while the buyers are largely banks, which invest in this paper for the purpose of building up a liquid secondary reserve. Ordinarily, also, the central bank stands ready to buy this type of paper at a known price, so that there need never be a time when prime acceptances cannot be disposed of by dealers. Markets of this sort are commonly referred to as bill markets, because the acceptances dealt in are a form of bill of exchange.

Advantages of a bill market to bankers.—The advantages to the banker of a highly organized bill market are several. In the first place, the dealers make it a business to carry a portfolio of bills with a wide variety of maturity dates. This enables the banker to arrange his holding of bills in a fashion most satisfactory to his needs. If he has heavy demands from his own customers at a particular season of the year, he can buy bills that all mature at the time he will need added funds to meet his customers' demands. Or he can buy bills maturing on a long series of successive dates if this arrangement better suits his needs.

In the second place, there is no question of renewal of bills bought in the open market. They are paid promptly when due, with the result that the banker can be absolutely assured of payment at the exact time that the bills mature.

Lastly, it is customary for dealers to buy back bills before maturity, and sell them elsewhere, in the event that the original purchaser wishes to dispose of them before their due dates. In this way, shiftability is added to the natural liquidity of the bill. Moreover, since the bills are bought and sold on a discount basis—being short-term paper—they are

not likely to vary greatly in price. Although the banker may lose a small amount if the discount rate rises between the time he buys a bill and the date on which he sells it, the loss suffered is likely to be less than he would have to take, say, on the sale of bonds.

To illustrate this last point, suppose a banker buys a ninety-day bill for \$10,000 when the discount rate is 5 per cent. The bill will cost him \$9,875. If, at the end of sixty days, he decides to sell the bill, and if the discount rate at that time has risen to 8 per cent, he will obtain \$9,933.33 for the bill. This means that, for the sixty days during which he held the bill, his return was the difference between \$9,933.33 and \$9,875.00, or \$58.33, which is at the rate of $3\frac{1}{2}$ per cent, instead of the 5 per cent he would have obtained had he held the bill to maturity. The loss, therefore, is in the way of a reduction in the rate of return on the bill, not in any loss of principal. Moreover, the increase in the discount rate assumed in this example was much greater than would occur in a period of sixty days except in times of great stringency in the money market.

Bank acceptances as secondary reserves.—From the foregoing analysis, it is clear that bank acceptances constitute an excellent secondary reserve investment. They are drawn in the majority of instances to finance a specific sale and shipment of goods and are hence strictly self-liquidating in nature. This characteristic, combined with the added advantages afforded by their marketability, go far to make this type of commercial paper as satisfactory a secondary reserve as is available.

Treasury bills.—Another type of secondary reserve in wide favor with bankers consists of short-term government obligations, usually in the form of Treasury bills, which are dealt in on an organized market in the same fashion as bankers' acceptances. These bills are bought and sold on a discount basis and usually run either ninety or one hundred and eighty days to maturity. They are frequently handled by the same middlemen who act as dealers in acceptances and may hence be considered as part and parcel of the general bill market. They have the double advantage of ready marketability and short maturity.

When Treasury bills are properly issued, they not only have the characteristic of shiftability, being readily marketable before maturity, but are really liquid as well. Bills of this sort should be sold by the Treasury only in anticipation of assured revenue from taxation, the sale of long-term bonds to investors, or other legitimate sources. When issued for these purposes, the bills are actually paid at maturity from the income of taxpayers or investors and disappear from the assets of the banking system. It is therefore clear that properly issued Treasury bills constitute an unexceptionable secondary reserve investment.

Unfortunately, during the depression and since there has been a strong tendency to finance increasing government deficits by expanding the short-term debt instead of by the flotation of bonds. Treasury bills or certificates, in such circumstances, lose their real liquidity. They are issued in ever-increasing quantities, partly to obtain new cash and partly to take up maturing bills. It would be highly desirable to eliminate this practice and to confine the issue of Treasury bills to their proper purpose, thus making them really liquid short-term obligations.

The question of yield.—It has been noted that the banker may safely maintain smaller primary reserves than would otherwise be compatible with safety if he holds a well-selected portfolio of secondary reserves, and that this is advantageous because he is thus able to turn into earning assets funds that would otherwise be idle. When the banker selects his secondary reserve investments, he is accordingly interested in what they will yield him in the way of earnings. It is important, however, to emphasize the fact that yield should be a secondary consideration. Safety and liquidity must be primary objectives: safety because losses on unsound investments may readily more than offset the yield, and liquidity because a secondary reserve, by its very nature, must be quickly convertible into cash. For these reasons, acceptances and Treasury bills, properly issued, are better secondary reserves than call loans to brokers or bonds, although the latter may frequently have a higher yield.

Secondary reserves in the United States.—In this country the banks have held secondary reserve investments in bankers'

acceptances, open market commercial paper, call loans to brokers, Treasury bills, certificates and notes, and high grade marketable bonds. These types of paper are dealt in on what are known as open markets. The short-term markets, taken as a group, may be referred to as the money market, in contrast to the markets for long-term securities, which collectively make up the investment market. The following sections of the chapter will deal chiefly with the short-term markets that make up the money market. Since the banks to some extent hold marketable bonds as secondary reserves, that section of the investment market dealing with these securities will be treated briefly.

BANKERS' ACCEPTANCES

Origin and use.—The type of credit instrument now known in the United States as the banker's acceptance had no significant development until after the passage of the Federal Reserve Act. Prior to this, national banks had not the power to accept drafts drawn against them, and the number of state banks that accepted drafts was negligible. The Federal Reserve Act, as we have seen (Chapter 9), gave the national banks power to accept bills or drafts arising out of import or export transactions up to 50 per cent of their capital and surplus, while later amendments broadened this power to include drafts arising out of certain domestic transactions and increased the limit for an individual bank, by permission of the Federal Reserve Board, to 100 per cent of its capital and surplus, provided that not more than 50 per cent of the acceptances were domestic bills.

As the law now stands, member banks may accept, (1) drafts arising out of the domestic shipment of goods or the domestic storage of readily marketable staples, (2) drafts arising out of the exportation or importation of goods and the storage or shipment of goods in or between foreign countries, and (3) drafts drawn for the purpose of creating dollar exchange. All drafts coming under the first two heads must be secured either by shipping documents or by warehouse receipts. The third class—not yet very significant—is composed of “clean bills or drafts,” which are not directly secured by goods in storage or under shipment.

The acceptance market.—If bankers' acceptances are to perform their proper function in the banking system, it is essential that they be dealt in actively in a wide market. The existence of such a market implies, first, the existence of the acceptances themselves in the hands of a group of sellers who wish to dispose of them, and, second, a group of buyers who can be depended upon to buy at a price all of the acceptances that are offered for sale. It will also be necessary, as in other highly organized markets, to have a group of dealers—or brokers—to act as intermediaries between the buyers and the sellers.

The existence of a broad, active market in acceptances adds to the liquidity of this form of paper. Since the acceptance itself is used in financing the shipment and/or storage of marketable goods, it is self-liquidating paper and will turn into cash at maturity—market or no market. But if an active market exists, the natural liquidity of the acceptance is increased by its marketability. Acceptances are bought and sold on a discount basis, so that they can be easily transferred from one party to another before maturity, provided that there are always buyers ready to purchase any paper offered.

The development of the American acceptance market.—Although bankers' acceptances were used to a considerable extent during World War I, we shall be concerned here with the development of the market in the postwar period. Following the depression in 1921, the market for bank acceptances in the United States developed rapidly until 1929. Since the latter year, however, the volume of paper outstanding in the market has declined in marked fashion. This is shown in Table 12, which gives the amount of acceptances outstanding by classes at the end of each year from 1924 to 1946.

An examination of the figures here presented discloses certain interesting trends. It shows that bankers' acceptances have not had any wide use in financing the domestic shipment of goods, whereas the volume of acceptances based on goods in warehouse was substantial up to the end of 1933 and decreased sharply thereafter to the close of 1946. The decrease in the volume of warehouse credits after 1933 is probably to be accounted for by the A. A. A. program and two droughts that sharply reduced staple crop surpluses.

TABLE 12
BANKER'S ACCEPTANCES OUTSTANDING
(In millions)

<i>End of December</i>	<i>Total</i>	<i>Imports</i>	<i>Exports</i>	<i>Domes- tic</i>	<i>Ware- house Credits</i>	<i>Dollar Exchange</i>	<i>Goods Stored in or Shipped between Foreign Coun- tries</i>
1924	821	292	305	38	162	23	—
1925	774	311	297	26	103	19	17
1926	755	284	261	29	116	26	40
1927	1,081	313	391	21	197	28	131
1928	1,284	316	497	16	174	39	243
1929	1,732	383	524	23	285	76	441
1930	1,556	221	415	35	271	52	561
1931	974	159	222	16	251	31	296
1932	710	79	164	14	215	10	228
1933	764	94	207	14	263	4	182
1934	543	89	140	8	186	2	119
1935	397	107	94	11	99	2	84
1936	373	126	86	83		2	76
1937	343	117	87	78		2	59
1938	270	95	60	57		3	56
1939	233	103	39	54		16	22
1940	209	109	18	44		10	27
1941	194	116	15	48		4	11
1942	118	57	9	38		See Note 1	14
1943	117	66	11	30		See Note 1	9
1944	129	86	14	25		See Note 1	3
1945	154	103	18	26		See Note 1	7
1946	227	162	29	29		See Note 1	7

Note 1—Less than \$500,000.

Source: Annual Reports of the Federal Reserve Board; *Federal Reserve Bulletin*.

The establishment of various government credit agencies to extend credit to farmers at very favorable rates is also a factor in this reduction. Acceptances based on goods stored in or shipped between foreign countries showed a rapid increase up to the end of 1930 when they attained the largest volume of any class of bills. Since that time they have become much less significant. A large share of this class of acceptances

was based on goods stored in European countries—chiefly Germany—and the difficulties of 1931 brought a sharp decline in this type of bill. In any event, acceptances based on goods stored in foreign countries are of doubtful liquidity within the maturity of the acceptance, so that the large increase in this class of bills up to 1930 was not particularly desirable.

Taking the period shown in the table as a whole, acceptances based on the exportation and importation of goods have constituted the most important classes of bills and probably the best bills, being really self-liquidating in nature. In spite of the revival of business in the United States since 1934, these classes of acceptances have remained low in volume. This is in part attributable to the fact that the banks, having large excess reserves, have financed exporters and importers with direct loans instead of resorting to acceptance credits. Moreover, many of our exports after 1939 went to England and her allies and were paid for directly with dollar credits, no extension of credit being requested. Thus acceptances based on exports had well nigh vanished by the end of 1940.

During World War II both exports and imports increased, the rise in exports being especially pronounced. Most of this large foreign trade was lend-lease or government financed, however, and the market for bankers' acceptances virtually dried up. Since the close of the war, privately financed foreign trade has assumed large proportions, and there has been some increase in the amount of bankers' acceptances outstanding. The total is still small, however, and the fact that acceptances based on exports amounted to but \$42 million at the end of April 1947 seems to indicate that banks are financing exporters largely through direct loans as in the prewar period.

The organization of the American acceptance market.—It was pointed out in an earlier paragraph that a satisfactory discount market requires the existence of a group of sellers with acceptances to dispose of, a group of buyers always ready to absorb the supply of acceptances at some rate of discount, and dealers to act as intermediaries. The American market has these essential constituents. The parties for whom

the banks have accepted bills—or their banks acting as agents—are constantly coming into the possession of acceptances they wish to dispose of. There has also developed a group of acceptance dealers who will buy acceptances from banks or others who have them for sale. The acceptances bear no designated rate of interest, but are discounted by the dealers at the prevailing market rate. The dealers then dispose of the bills they have purchased at a lower rate, if possible, than that at which they have bought them, the dealers' profit being the difference between the buying and selling rates.

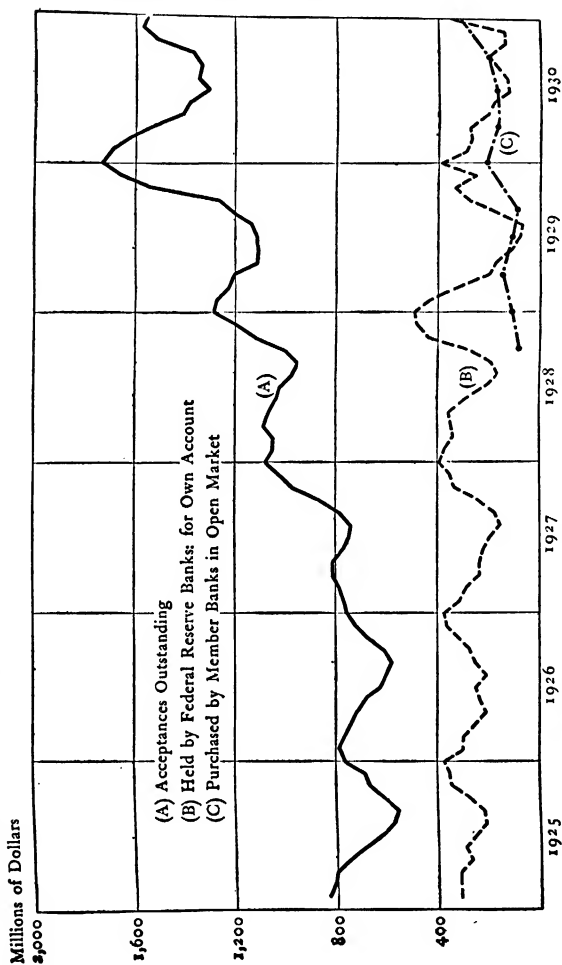
The Reserve banks and the acceptance market.—The majority of acceptances are sold by the dealers to banks, although corporations, clubs, and other parties seeking a highly liquid, short-time investment occasionally purchase this type of paper. If the discount market is to function properly, there must also be some institution that will purchase any acceptances that cannot be marketed elsewhere, in order that a situation will never arise in which the dealers are unable to dispose of their holdings. In the United States the Federal Reserve banks have adopted this policy of standing ready always to buy eligible bankers' acceptances at their quoted buying rates. They have thus supported the market by taking up any excess of acceptances that could not be disposed of elsewhere.

The policy of supporting the acceptance market is in line with the policy followed by the Bank of England, which stands ready to discount high-grade acceptances for the English dealers at any time. The Bank of England, however, maintains its buying (discount) rate on such paper above the market rate, so that the dealers can discount bills with the Bank only at a loss. The Reserve banks, on the other hand, up to the time of the depression, most of the time kept their buying rates on acceptances below their regular discount rates to such an extent that the former tended to fix the rate in the acceptance market. The result was doubtless to stimulate the rapid development of the market for acceptances, but it also resulted at times in the holding by the Reserve banks of an unduly large proportion of the total acceptances outstanding. This is shown on Chart 4, which traces the course of total acceptances outstanding, the amount held by

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CHART 4
DISTRIBUTION OF DOLLAR ACCEPTANCES AND TOTAL OUTSTANDING



Source: Annual Report of the Federal Reserve Board 1930.

the Reserve banks for their own account, and—for two years—the amount purchased by member banks in the open market from 1925 to 1930 inclusive. After 1930 the situation changed. The heavy demand of the banks for liquid investments drove the market rate on acceptances below the buying rate at the Reserve banks with the result that the great bulk of the acceptances outstanding were held by member banks with the exception of a few months following England's departure from the gold standard when the Reserve banks bought heavily in the open market. Following the banking crisis in 1933, the Reserve banks' holdings of acceptances dwindled until, in the spring of 1937, they amounted to less than 1 per cent of the total outstanding, and had disappeared entirely from the Reserve banks' portfolios before the end of 1940. Thus for some years the acceptance market has stood on its own feet without undue assistance from the Reserve banks. The explanation of this lies in the easy money conditions that have prevailed. It is to be hoped that, with a return eventually to more normal conditions, the Reserve banks will continue to allow the acceptance market to stand on its own feet by keeping their buying rates above the market as does the Bank of England. Under such circumstances, acceptances would be sold to the Reserve banks only in times of stress, as in 1931 and 1933, while in ordinary times practically the entire volume of outstanding bills would be held by the banks or other investors.

COMMERCIAL PAPER

Origin and nature.—In a broad sense, commercial paper includes any sort of self-liquidating paper arising out of commercial or industrial transactions. It would thus include the notes and/or acceptances discounted by a bank for its own customers as well as bankers' acceptances, which have been discussed in the preceding section of the chapter. As the term is used in the present connection, however, it refers to the promissory notes of borrowers that are sold in the open market. That is, the borrower, instead of applying to his bank for a loan, sells his note to a dealer known as a commercial paper dealer or house, the dealer in turn disposing of the paper to banks having surplus funds to invest.

The bulk of the paper handled by the commercial paper houses consists of the single-name promissory notes of the borrowers, although double-name trade and non-trade paper, i.e., promissory notes held by the borrower and endorsed by him, is handled to some extent. More recently, acceptances have also entered into the portfolios of the commercial paper houses in relatively small amounts.

The open market for commercial paper in this country dates back to twenty-five years or more before the Civil War.¹ The dealers in these early times were brokers, operating on a straight commission basis, Mr. Clews' banking and brokerage house being the only exception. Clews initiated the practice of buying the paper outright and selling it at a profit, if possible, in addition to the commission charged. This practice became increasingly popular as time went on, and at present practically all of the commercial paper dealers buy their paper outright, although still charging a commission as would a strictly brokerage house.

Organization of the market.—The market for commercial paper, like that for bankers' acceptances, is composed of a group of sellers, a group of middlemen or dealers, and a group of buyers. The sellers of commercial paper are business concerns of high credit standing who are in need of working capital funds to finance the production or distribution of their products. In the typical instance, they sell their promissory notes to the commercial paper dealers or houses, who buy the paper outright at the market rate of discount less a commission of $\frac{1}{4}$ of 1 per cent. The dealer then offers this paper to banks having surplus funds to invest. If he can sell it at a lower rate of discount than that at which it was purchased, he makes a profit in addition to his commission. If he has to dispose of it at a higher rate than that at which he bought, however, he will lose on the transaction accordingly.

The business of the commercial paper house is thus to buy and sell paper, not to hold it as an investment. If for any reason it is impossible to sell the paper promptly, the dealer will obtain a loan from a commercial bank—putting up the paper as security—to carry the paper until it can be disposed

¹ Phillips, C. A., *Bank Credit*, p. 131.

of. When the paper is offered for sale to a bank, the prospective purchaser is allowed a ten-day option to permit an investigation of the credit standing of the maker or makers of the paper in question, which may be returned at the end of the ten days if the investigation proves it to be unsatisfactory. The necessity for some sort of option arises out of the fact that the commercial paper houses, while guaranteeing the genuineness of the signatures on the paper sold, do not themselves endorse it and so are not liable in the event of the failure of a given maker to pay his note at maturity. Thus, although the commercial paper dealers themselves make a thorough investigation of the borrowers' credit position before buying the paper, it is only fair to the purchasing banks to allow them to make independent analyses of the quality of the paper in which they wish to invest.

In order to make open market commercial paper more marketable, the notes are frequently made in denominations of \$2500 and \$5000, so that they may be sold to the smaller banks having limited amounts to invest, while even the larger banks often prefer to purchase the notes of a variety of makers rather than to invest a large sum in the paper of a single name. Notes of very large denominations are accordingly not usual although they appear occasionally in the market. The notes ordinarily run from thirty days to six or eight months and are ordinarily made payable to the order of the maker and endorsed in blank, which permits them to be transferred from hand to hand without further endorsement.

Once a bank has decided to purchase a note or notes from a commercial paper house, it is customary for the bank to hold the paper until maturity. In fact, there is no quick market for such paper prior to maturity as in the case of bankers' acceptances. The Federal Reserve banks are not permitted to deal in this class of paper in the open market and cannot, therefore, support the market for commercial paper as they have for bankers' acceptances. Open market commercial paper may be rediscounted at the Reserve banks, however, when within ninety days of maturity, so that it is possible to turn it into reserve funds before maturity if necessary through the rediscount process.

Advantages and drawbacks.—To the banks the existence of the open market for commercial paper is advantageous in a number of respects. In the first place, it provides one method by which the bank may obtain diversification of its business. The makers of open market paper comprise business houses in various lines of trade and industry located in various sections of the country, so that the dealers have a well-rounded and highly diversified list of names in their portfolios. This makes investment in commercial paper especially desirable for banks in one-industry communities where local loans are tied up with a single industry.

A second advantage of the commercial paper market is that it offers a source of investment for the surplus funds of the banks in seasons when the local demand for loans is at a low point. The commercial paper houses offer a wide variety of maturities, so that a bank may buy paper maturing at the time when funds will be needed locally to meet the next seasonal demand for loans at home.

Two other advantages may also be mentioned. Paper purchased in the open market is paid at maturity. No renewals are expected or asked for, while the bank frequently finds it necessary to renew the maturing paper of its own customers. Furthermore, open market paper constitutes a safe investment, the losses on such paper in the past having been very small indeed.

While the commercial paper market is thus seen to be beneficial to the banks in a variety of ways, it presents other aspects that are less advantageous. Some banks are bound to lose business because certain customers borrow through the commercial paper houses instead of coming to their own banks for loans. In times of stress, however, the commercial paper dealers are likely sharply to curtail their purchases, and these same customers will be forced to fall back on their banks for accommodation at a time when the latter will find it difficult to care for their needs.

When a bank loses a customer to the open market, the funds thereby released to the bank may themselves be invested in open market paper, but the bank obtains open market notes only at a smaller discount as a rule than would be charged to its own customers and loses somewhat in con-

sequence. Many times, however, the legal restriction on loans to one borrower prevents a large borrower from obtaining more than a fraction of the funds he needs to borrow from his local bank, and he resorts to the open market for accommodation on this account. In such circumstances, the bank cannot be said to lose, since in any event it could not have cared for the customer's credit needs.

TABLE 13
COMMERCIAL PAPER OUTSTANDING
(In millions of dollars)

<i>Year</i>	<i>January</i>	<i>April</i>	<i>July</i>	<i>October</i>
1922	705	792	805	775
1923	807	867	854	815
1924	818	871	879	925
1925	820	801	727	684
1926	654	663	655	593
1927	551	599	569	611
1928	577	571	483	427
1929	407	351	265	285
1930	304	553	528	485
1931	327	307	289	210
1932	108	108	100	113
1933	85	64	97	130
1934	108	139	168	188
1935	171	173	164	180
1936	178	174	188	199
1937	244	285	325	323
1938	299	271	211	213
1939	195	192	194	205
1940	219	239	232	252
1941	232	275	330	378
1942	381	373	305	271
1943	220	179	150	188
1944	209	172	143	142
1945	162	119	107	127
1946	174	149	131	202

Source Annual Reports of the Federal Reserve Board *Federal Reserve Bulletin*

We need not concern ourselves with the advantages and disadvantages of open market borrowing to the borrower. It may be taken for granted that the lower rate of discount obtained plus the enhancement of his credit standing that

results from selling his notes to commercial paper houses are more than sufficient to offset any drawbacks incidental to such borrowing.

On the whole, the advantages of the commercial paper market, both to the banks and to the borrowers, far outweigh any attendant drawbacks. In fact, in a unit banking system such as that of the United States, some such arrangement is well-nigh essential to provide banks in single-industry areas with the opportunity to diversify their business through investment in this safe form of self-liquidating paper.

The volume of commercial paper outstanding varies with changes in business and financial conditions as is indicated in Table 13. The sharp decrease in the amount of commercial paper outstanding, which occurred in 1928 and 1929, may be attributed to the bull stock market, which enabled business concerns to finance their needs more cheaply through the issue of stock than through borrowing at the bank or on the open market. With the termination of the bull market, commercial paper outstanding rapidly recovered approximately to the levels of 1926 and 1927. As the depression deepened, however, the volume of commercial paper fell off rapidly, reaching a low of \$60 million in May 1933. Recovery from the low point was slow, reaching only \$323 million in October 1937, declining again to \$205 million in 1939 and standing at \$202 million in October 1946.

CALL LOANS TO BROKERS

Nature and use.—A third type of open market investment, and one that has always bulked large in importance in this country, consists of call loans to brokers on the stock exchange. Such loans come into existence when brokers borrow at the banks in behalf of their customers who wish to buy stocks or bonds on a margin. To illustrate, a speculator will put up cash with his broker to, say, 25 per cent of the price of the stock he wishes to buy. The remaining 75 per cent is then borrowed by the broker from the bank, the entire amount of stock purchased being put up as security for the loan. If the purchase price of the stock amounts to \$10,000, the bank then holds \$10,000 of security against a loan of \$7500. If the price of the stock goes down, so that its

market value is worth less than \$10,000, the bank may demand added security sufficient to keep its 25 per cent margin intact. In the event that the added security is not forthcoming, the bank reserves the right to sell the collateral and recover the amount of its loan. In case the stock advances in price, there is of course no need for such action on the part of the bank.

The loans to brokers of the type here considered are made on call. That is, the loan may be terminated at the pleasure of either the bank or the borrower. Presumably, the banks will call loans of this character when they need funds for other purposes, while the broker will call a loan when his customer sells the stock he has purchased (whether at a profit or a loss) and withdraws from the market. At times, also, the speculator or the investor may obtain a time loan from his bank in order to carry his securities, in which case he may close out his call loans.

Desirability as a source of investment.—From the point of view of the banks, call loans appear to furnish an excellent source of investment for temporary surplus funds. With maturities at the option of the bank and with readily salable stocks or bonds as security, they seem to furnish all that could be asked in the way of liquidity and safety.

But are call loans as satisfactory as they appear to be in these respects? We have seen in an earlier connection that, in the period prior to the establishment of the Federal Reserve System, while call loans served satisfactorily in normal times, they became thoroughly frozen in times of emergency when all of the New York banks were attempting to call loans simultaneously. At present, under the Federal Reserve System, the danger of such occurrences is much more remote. At the time of the stock market break in 1929, loans were called in tremendous amounts by interior banks and others without a money panic. This was made possible by the shifting of loans from the accounts of interior banks and others to the New York banks, whose loans to brokers increased by over \$1,000,000,000 in the week ending October 30—a week in which total brokers' loans decreased by a similar amount. The New York banks were aided in this action "by the New York Reserve bank, which loaned freely

to member banks and also purchased \$150,000,000 of United States securities in the open market."² It was thus largely the assistance of the New York Reserve bank that enabled the member banks of that city to meet the situation in such a satisfactory fashion.

It is apparent, then, that call loans as a class were not highly liquid in 1929, but that the existence of surplus lending power elsewhere in the banking system permitted the shifting of these loans from the lenders who wished to transfer funds from the market to the New York city banks. Since the Reserve banks may be counted upon, presumably, to render aid in times of emergency, we must conclude that at present call loans are liquid for the individual banks of the

TABLE 14

BROKERS' LOANS MADE BY REPORTING MEMBER BANKS IN NEW YORK CITY
(In millions of dollars)

		Demand and Time Loans			Demand Loans	Time Loans	Total
		For Own Account	For Out of Town Banks	For Others			
1924	Apr.	680	734	(Not given)	1,037	377	1,414
	Oct.	963	722		1,188	497	1,685
1925	Apr.	998	1,073		1,392	679	2,071
	Oct.	1,006	1,544	528	1,769	781	2,550
1926	Apr.	905	1,035		1,645	822	2,467
	Oct.	866	1,106		1,975	723	2,698
1927	Apr.	929	1,131	806	2,190	677	2,866
	Oct.	1,103	1,326	962	2,603	789	3,392
1928	Apr.	1,193	1,616	1,252	3,122	940	4,062
	Oct.	933	1,720	2,048	4,075	625	4,701
1929	Apr.	934	1,649	2,893	5,064	413	5,477
	Oct.	1,257	1,639	3,602	6,082	416	6,498
1930	Apr.	1,557	1,183	1,376	3,585	530	4,115
	Oct.	1,675	537	557	2,165	604	2,769
1931	Apr.	1,322	271	231	1,463	361	1,824
	Oct.	674	90	157	637	284	921
1932	Apr.	423	70	7	401	99	500
	Oct.	389	16	6	262	149	411
1933	Apr.	374	21	4	258	141	399
	Oct.	663	111	5	508	271	779
1934	Apr.	813	156	6	713	262	975
	Oct.	612	133	1	474	272	746
1935	Apr.	714	86	2	566	237	803
	Oct.	836	12		368	480	848

² Annual Report of the Federal Reserve Board 1929, p. 10.

TABLE 14 (CONT'D.)

BROKERS' LOANS MADE BY REPORTING MEMBER BANKS
IN NEW YORK CITY
(In millions of dollars)

<i>Year</i>	<i>Demand and Time Loans for Open Account</i>	<i>Year</i>	<i>Demand and Time Loans for Open Account</i>
1936 April	1,034	1942 April	316
October	984	October	369
1937 April	1,085	1943 April	965
October	915	October	1,461
1938 April	489	1944 April	973
October	528	October	1,225
1939 April	555	1945 April	1,279
October	430	October	1,644
1940 April	482	1946 April	1,704
October	301	October	811
1941 April	341	1947 April	521
October	376	October	

Source: Annual Reports of the Federal Reserve Board; *Federal Reserve Bulletin*.

system. Their safety also was demonstrated by the absence of losses following the 1929 stock market break.

Time loans to brokers.—In addition to call loans, short-term time loans secured by stocks and bonds are made to brokers on the open market in considerable amounts and must be considered as a possible source of investment for temporary surplus funds. Since these loans run for a designated period—usually ninety days—they are considered less liquid than call loans, but otherwise have similar characteristics.

Control of margin requirements.—The hypothetical example given in the first paragraph of this section to illustrate lending to brokers on margin is applicable to the period before

1934. Prior to the passage of the Securities Exchange Act of 1934, bankers were at liberty to fix their own margin requirements. Thus, at one time a banker might require a margin of 25 per cent, while at another time 20 per cent, or 35 per cent, or 40 per cent might be required. The Securities Exchange Act altered this situation by vesting in the Board of Governors of the Federal Reserve System the power to control margin requirements. Certain specific requirements were laid down by the Act, but these were subject to change from time to time, as deemed desirable, by the Board of Governors.

The different requirements that have been established by the Board since 1937 are indicated in the accompanying table.

TABLE 15
MARGIN REQUIREMENTS¹

Prescribed by Board of Governors of the Federal Reserve System in accordance with the Securities Exchange Act of 1934

(Per cent of market value)

Nov. 1, 1937 Feb. 4, 1945	Feb. 5 1945 July 4, 1945	July 5, 1945 Jan. 20, 1946	Jan. 21 1946 Jan. 31, 1947	Feb. 1, 1947 Mar. 29, 1949	Effect. Mar. 30, 1949
Regulation T: For extension of credit by brokers and dealers on listed securities 40	50	75	100	75	50
For short sales 50	50	75	100	75	50
Regulation U: For loans by banks on stocks 40	50	75	100	75	50

¹ Regulations T and U limit the amount of credit that may be extended on a security by prescribing a maximum loan value, which is a specified percentage of its market value at the time of the extension; the "margin requirements" shown in this table are the difference between the market value (100 per cent) and the maximum loan value.

Source: Thirty-fifth Annual Report of the Board of Governors of the Federal Reserve System, 1948.

It is obvious that where the margin requirement is 100 per cent, no loans may be made to brokers for carrying or trading in listed securities, while with a requirement of 50 per cent (as at present) such lending is confined to an amount not

greater than 50 per cent of the market value of the securities. Securities of the United States (direct and guaranteed), of states and political subdivisions, of certain corporations in which the government has an interest, and certain unlisted securities are exempted from these controls.

The control of margin requirements by the Board of Governors is doubtless desirable. High margin requirements can put a damper on the speculative fervor engendered by a bull market and eliminate the more violent movements of stock prices. Had the Board been endowed with this power in 1928-1929, the extreme rise in stock prices that occurred at that time might have been largely averted.

Significance of loans to brokers.—The importance of brokers' loans is shown in Table 14, which gives the amounts of such loans outstanding for certain months of each year from 1924 through 1947.

Examination of the data in this table discloses the fact that loans to brokers bulk large in importance as a source of investment of temporary surplus funds. The volume of funds invested in this market, however, varies a good deal from time to time, depending chiefly upon the degree of speculative activity in the stock market. Thus in 1928 and 1929, an unduly large amount of funds was directed into this market while, by 1932, the volume of brokers' loans was unusually small. Although a bull market of substantial proportions developed in 1935 and 1936, the volume of brokers' loans remained moderate in opposition to normal expectations. The reason for this was that the huge government expenditures had placed sufficient funds in the hands of speculators to enable them to operate on a cash basis to a large extent rather than depending upon borrowed funds. After 1936-1937 the stock market was quiet and loans to brokers declined to a low figure as shown in the table for 1940.

During World War II, loans to brokers and dealers increased substantially, as the table indicates. A large share of this increase, however, consisted of loans for carrying United States obligations, the amount of loans in this group amounting to \$1,435 million in March 1946 out of a total of \$1,962 million. Following the close of the Treasury war financing program, this type of brokers' loan decreased in

marked fashion, being less than other brokers' loans by the spring of 1947.

TREASURY BILLS AND CERTIFICATES

Significance in the money market.—Another important market for short-term paper—of recent years by far the most important market—is the market for Treasury bills and certificates of indebtedness. Interest-bearing certificates of indebtedness were used widely during World War I, being issued by the Treasury in anticipation of receipts from taxes or from the sale of bond issues. They continued to be issued after the war in connection with government financing, and in the years just prior to the great depression the volume of such certificates of less than six months' maturity averaged about \$750,000,000. In 1929, Congress authorized the Treasury to issue bills, similar to the British Treasury bills, bearing no specified rate of interest, but to be discounted in the market in the same fashion as commercial bills or acceptances. From that time on until 1935, both certificates and bills were issued by the Treasury and sold in the money market.

The volume of certificates and bills outstanding on certain dates since 1931 is indicated in Table 16. It is to be noted that, for the period shown in the table, the volume of funds invested in short-term government obligations was much larger than the totals for the other short-term markets, even prior to World War II. With our entry into World War II, as was to be expected, the volume of these obligations expanded tremendously and completely dominated the short-term money market. Treasury certificates, which had not been issued since 1934, were again resorted to in 1942, their volume exceeding that of Treasury bills very substantially. Certificates are usually issued with one-year maturities while the bills mature in shorter periods.

Treasury notes.—In addition to bills and certificates, the Treasury obtains a large amount of funds from the sale of notes that are issued with maturities not in excess of five years. Treasury notes thus are securities of fairly short maturity and are widely invested in by the banks. Of the \$8,142 million of Treasury notes outstanding at the end of May 1947, \$4,594

million had a maturity date within the current year (Sept. 15, 1947), while the remaining \$3,748 million were dated to mature one year later. The banks naturally consider such notes practically in the light of bills or certificates for purposes of secondary reserves.

TABLE 16
TREASURY NOTES, BILLS, AND CERTIFICATES
(In millions)

<i>End of June</i>	<i>Notes</i>	<i>Certificates</i>	<i>Bills</i>	<i>Total</i>
1932	1,261	2,726	616	4,603
1933	4,548	2,108	954	7,610
1934	6,653	1,517	1,404	9,574
1935	10,023	—	2,053	12,076
1936	11,381	—	2,354	13,635
1937	10,617	—	2,303	12,920
1938	9,147	—	1,154	10,301
1939	7,243	—	1,308	8,551
1940	6,383	—	1,302	7,685
1941	5,699	—	1,603	7,302
1942	6,689	3,096	2,508	12,293
1943	9,168	16,561	11,864	37,593
1944	17,405	28,822	14,734	60,961
1945	23,497	34,136	17,041	74,674
1946	18,261	37,720	17,039	73,020
1947	8,142	25,296	15,775	49,213

Source: *Federal Reserve Bulletin*.

HIGH-GRADE BONDS

Marketability essential.—The last group of investments purchased by the banks in the open market consists of high-grade, readily marketable bonds. It should be emphasized that a quick, close market is essential for bonds so held by the commercial banks. In buying bonds, the banks are furnishing long-term investment credit and can only hope to turn such securities into cash through sale in the market. If the bonds purchased for secondary reserves are dealt in regularly on an organized exchange, the banks will have no difficulty disposing of them at the prevailing market price.

Types of bonds.—In earlier years, prior to World War I, when the amount of government bonds available was of negligible proportions, bonds of railroads and public utilities

were considered suitable investment for secondary reserves when they were of high grade and had an active market. Since World War I, however, government bonds have been available for purchase by the banks in substantial amounts and are now the only type of long-term securities that need be considered under the head of secondary reserves.

Although, theoretically, the price of government bonds is subject to market fluctuations, as indicated by the severe decline in Liberty bond prices after World War I, the present situation on long-term government obligations differs materially from that concerning other bonds from the standpoint of their use as secondary reserves. There are two reasons for this. In the first place, Federal Reserve policy has for some time been directed toward the maintenance of stability in the price of government bonds through open market purchases and sales by the Reserve banks. Secondly, government bonds may be used at par as security for advances to member banks (or to nonmember banks at a higher rate). Under these circumstances the banker is able either to sell government bonds in the market or to use them as collateral for a loan from the Reserve banks without fear of substantial loss. From the bankers' point of view, then, these bonds have a high degree of both liquidity and safety.

Volume of secondary reserves.—In order to give some idea of the relative importance of secondary reserve investments in banks in the United States, the following figures, as of December 31, 1946, are presented. Data for bankers' acceptances and open market commercial paper represent totals outstanding. Loans to brokers and government securities are taken from the combined statement of operating insured commercial banks in the United States.

Bankers' acceptances	\$ 227,000,000
Commercial paper	228,000,000
Loans to brokers	1,517,318,000
Treasury bills	1,271,662,000
Treasury certificates of indebtedness	12,293,195,000
Treasury notes	6,781,379,000
Treasury bonds—5 years or less	12,727,955,000
Treasury bonds—5 to 10 years	29,700,350,000
Treasury bonds—10 to 20 years	6,597,224,000
Treasury bonds—after 20 years	3,007,790,000

If we wish to be conservative and include in secondary reserves only such bank holdings of Treasury bonds as mature in five or less years, commercial banks' secondary reserves still totaled slightly over \$35.1 billion. This item added to the \$33.7 billion of working reserves held by the commercial banks on the same date, gives an aggregate of \$68.8 billion of primary and secondary reserves held by these banks against deposit liabilities of \$137 billion, or almost exactly 50 per cent.

COMPARISON OF OPEN MARKET YIELDS

Yield of secondary importance.—Since most of the commercial banks' investments in the open markets are for the purpose of acquiring secondary reserves, the question of yield is bound to be of minor importance as compared with the major requirements of safety and liquidity. Thus Treasury bills and bankers' acceptances are considered ideal as secondary reserves in spite of their low yields because of their great safety and liquidity. But, although yield is not the primary consideration with bankers, it is not to be left out of account entirely. If two open market investments are equally desirable in other respects, for example, the one with the higher yield would be most satisfactory when obtainable.

Comparative yields.—For purposes of comparison, Table 17 shows open market money rates or yields on the various classes of secondary reserve investments discussed above. For the sake of completeness, the yield on the longer-term government bonds is included, especially as some bankers doubtless consider their investments in these issues as secondary reserves under currently existing conditions. Yearly averages are used in order to make the comparison somewhat simpler since the different short-term rates, at least in some years in the period covered, show rather widely varying week-to-week or month-to-month fluctuations.

In analyzing the data presented in the table, it will be advisable to distinguish between the first and last part of the period covered. As might be expected, short-term Treasury obligations and bankers' acceptances show the lowest yields throughout the entire period with the exception of 1928 and 1929 when the yield on Treasury bonds was less than on

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TABLE 17
INTEREST RATE, DISCOUNT, OR YIELD ON—

Average for year	4-6 mo. commercial paper	Bankers' acceptances 90-days	Call loans (renewal)	Treasury obliga- tions 3-6 mo. ¹	Treasury bonds	30 AAA corporate bonds
1922	4.43	3.51	4.29	3.47	4.30	5.12
1923	4.98	4.10	4.85	3.93	4.36	5.12
1924	3.91	2.98	3.08	2.77	4.06	5.00
1925	4.03	3.28	4.20	3.03	3.86	4.88
1926	4.24	3.60	4.50	3.25	3.68	4.73
1927	4.01	3.45	4.06	3.11	3.34	4.57
1928	4.84	4.09	6.05	3.92	3.33	4.55
1929	5.78	5.02	7.62	4.42	3.60	4.73
1930	3.56	2.46	2.94	2.23	3.28	4.55
1931	2.64	1.58	1.74	1.15	3.31	4.58
1932	2.84	1.28	2.05	0.78	3.66	5.01
1933	1.87	0.60	1.18	0.26	3.31	4.49
1934	1.02	0.25	1.00	0.26	3.10	4.00
1935	0.76	0.13	0.56	0.14	2.70	3.60
1936	0.75	0.15	0.91	0.14	2.65	3.24
1937	0.95	0.43	1.00	0.28	2.68	3.26
1938	0.81	0.44	1.00	0.07	2.56	3.19
1939	0.59	0.44	1.00	0.05	2.36	3.01
1940	0.56	0.44	1.00	0.04	2.21	2.84
1941	0.54	0.44	1.00	0.103	1.95	2.77
1942	0.66	0.44	1.00	0.326	1.93	2.83
1943	0.69	0.44	1.00	0.373	1.96	2.73
1944	0.73	0.44	1.00	0.375	1.94	2.72
1945	0.75	0.44	1.00	0.375	1.60	2.62
1946	0.81	0.61	1.16	0.375	1.45	2.53

¹ Average yield on Treasury bills, 3-6 mo. in 1935-1936, 91-day dealers' quotations in 1937-1940. Tax-exempt bills prior to March 1941; taxable bills thereafter.

Sources: Short term rates through 1933 are from data compiled by the Standard Statistics Company. Yields on Treasury bonds, 30 AAA corporate bonds, and average short-term rates 1933-1936 are from the Annual Report of the Board of Governors of the Federal Reserve System, 1935, and the Federal Reserve Bulletin, May 1937. All data for 1937-1940 are from the Federal Reserve Bulletin, November 1940. All data for 1941-1943 are from the Federal Reserve Bulletin, October 1944. All data for 1944-1946 are from the *Federal Reserve Bulletin*, October 1947.

Treasury bills and certificates. On the average, however, in the first eight years of the period, there is not much to choose between commercial paper, call loans, and high-grade corporate bonds as far as yield is concerned. This was not the case in the latter years of the period, when the yield on both

Treasury and high-grade corporate bonds was much higher than on either commercial paper or call loans. Accordingly, an analysis of comparative yields in the predepression period would lead to conclusions that would not be valid for the later years. Bearing this in mind, we may consider the question of yield before 1930 and subsequent to the great depression.

During the first eight years of the period, the average rate on commercial paper was 4.53 per cent, as compared with 4.83 per cent on call loans and 4.84 per cent on high-grade corporate bonds. Commercial paper, however, over a long series of years had shown much smaller losses than high-grade bonds.³ Furthermore, it is purchased on a flat discount basis, while a commission may have to be paid for the bonds purchased by a bank. For all except the New York banks also a charge of not less than 5 per cent of the interest received was made on call loans placed for interior institutions, which lowered the yield to the latter.⁴ Everything considered, taking safety, liquidity, and yield all into account, commercial paper appears to have been more satisfactory than either bonds or call loans as an open market investment. Commercial paper was also eligible for rediscount when within ninety days of maturity, which gave it an added liquidity not possessed before the establishment of the Federal Reserve System.

In the last twelve or more years of the period covered in the table, money rates have been so extremely low that yield necessarily assumed added importance. In the period prior to World War II, aside from Treasury bills that yielded practically nothing, the volume of paper outstanding in the short-term markets was comparatively small and the banks had large excess reserves seeking investment. With our entry into the war, it was almost essential for the banks to expand their investments in government securities. The yield on Treasury bills continued very low— $\frac{3}{8}$ of 1 per cent—but

³ See Rodkey, R. G., *The Banking Process*, p. 149.

⁴ This statement applies to the period prior to September 10, 1929. On that date the charge was altered to $\frac{1}{2}$ of 1 per cent per annum. A similar charge was exacted on "loans for others" between September 1, 1928, and November 16, 1931. After the latter date the clearing house banks ceased to place such loans, nor are member banks allowed to place loans for others under the Banking Act of 1933.

higher yields were available on Treasury certificates, while notes and bonds had still higher yields. Under the circumstances, and especially in view of the Federal Reserve policy of maintaining government security prices, it is no surprise that the banks concentrated their investment in "governments" in certificates, notes, and bonds where somewhat more than a microscopic yield was available.

Conclusion.—Having considered the utilization of a portion of their assets by the commercial banks in the maintenance of primary and secondary reserves, we are now ready to turn our attention to the chief earning assets of the banks—loans and investments. The problem of making sound loans and investments is the heart of sound banking practice. The next chapter, therefore, will be devoted to the methods to be followed in attaining a sound portfolio of earning assets.

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CHAPTER 15

LOANS, DISCOUNTS, AND INVESTMENTS

Introduction.—In the description of the nature of banking in Chapter 3, it was pointed out that the chief business of a bank is to lend or to invest the funds that are deposited with it after setting aside a sufficient reserve to care for probable withdrawals by depositors. We have already considered the question of reserves as well as of those loans and investments that the commercial banks make in the open market. More important than either of these questions is that of loans and discounts granted to the bank's own customers.

The commercial deposits pool.—As a preface to the consideration of the commercial banks' lending activities, it will be advisable to have in mind a clear picture of the part that should be played by the commercial banks in the economic system. This has already been described concisely in an earlier connection (Chapter 3), but may well be reviewed and further elucidated here. The resources of any business enterprise are divided into two classes: fixed assets and quick or current assets. The former include such items as real estate, plant, and equipment, which are not themselves offered for sale, but are nevertheless essential factors in the process of manufacturing or distributing goods. The current assets, on the contrary, include inventories, which are destined to be sold, and bills and accounts receivable, and cash or immediate claims to cash. For purposes of safety and convenience in making payments, the latter item is held as a deposit credit with the bank, the total of such deposited funds constituting what we have termed commercial deposits.

The size of the cash balance (i.e., checking deposit) that any enterprise finds it desirable to keep on hand varies markedly from business to business and from season to season. Some concerns, such as a cash grocery business, usually have relatively large and fairly steady cash balances, while other

enterprises whose business is subject to decided seasonal variations may draw their balances down to a low figure, and find it necessary to borrow as well, at a period of seasonal strain, only to pay off their indebtedness and build up their bank balances at the close of the busy season. In any event, some cash balance must be maintained, even when a concern is borrowing from its bank, since no business can be conducted safely at any time with no cash or bank balance whatsoever.

These deposits, when pooled by the banks, constitute the source from which accommodation is extended to those who need temporary additions to their working capital funds. The total of commercial deposits of all the banks forms a

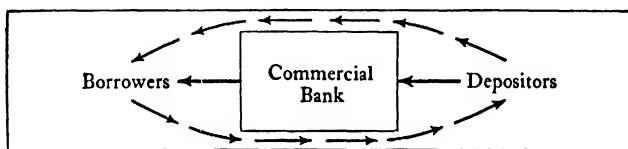


FIG. 12. COMMERCIAL DEPOSITS POOL

pool that is drawn upon when the banks lend to concerns temporarily in need of more funds than they have available for building up their working capital, and is built up again as the business enterprises receiving checks from these borrowers deposit such checks in their own banks. This is shown graphically in the accompanying diagram. The significant point to be noted is that the depositors and borrowers are all of the same general class—business enterprises—and that those who at one time are chiefly depositors at another may be chiefly borrowers.

By way of warning, it should be noted that the funds referred to in the foregoing paragraph do not, in the main, consist of cash. The businessman commonly thinks of his bank balance as a cash balance, since it is payable by the bank in hand-to-hand money on demand. Actually, of course, only a comparatively small portion of total deposits is held by the banks in the form of cash or reserve. The commercial deposit pool, then, is largely a pool of credit balances that are transferred from depositor to depositor and from bank to bank by means of checks. The loans made by one bank and credited

to the accounts of the borrowers shortly become deposits of other banks in the system as the borrowers draw checks against their accounts and send them to creditors who deposit them in their own banks. The banking system as a whole is accordingly limited in its lending activities, assuming an effective demand for loans, only by the size of the reserves that the banks find it necessary or desirable to maintain; but the loans and investments of the individual bank, as will be shown in Chapter 17, are limited by the amount of deposits that are held with it. Consequently, it is perfectly proper to speak of the lending or investment of commercial deposits by the banks, even though the deposits of any particular bank may have resulted in considerable measure from the lending operations of other banks in the system.

The extension of commercial credit—as represented by the self-liquidating loan—is a proper method of utilizing commercial deposits, since it is the purpose of the depositor of such funds to use them shortly himself in the acquisition of goods or materials that will be turned into cash through sale, or to pay for goods and materials that he has already purchased.

The extension of investment credit on the basis of commercial deposits, on the other hand, is ill-advised. The same conclusion applies to the purchase of investment securities on the basis of demand deposits. The investment borrower, whether the bank's customer or the issuer of bonds the bank has bought, uses the funds he obtains to purchase land or fixed capital that is used over a long period in the productive process. An investment loan is repaid, therefore, not from the sale of the land or capital purchased with the proceeds, but gradually from the earnings of the business made possible by the investment. Nevertheless, since the commercial banks do follow the practice of granting investment loans and purchasing investment securities on the basis of commercial deposits, we shall consider that type of loan and investment in this chapter, as well as consumption loans, which, in late years, have assumed increasing importance. Consumption loans, which are still of least importance in the present connection, will be considered first, after which the more significant commercial and investment loans and investments will receive attention.

CONSUMER LOANS

Increased importance of consumer loans.—Consumer loans, whether secured or unsecured, are those loans the proceeds of which are used for consumption purposes, such as the purchase of automobiles, household equipment, and other retail purchases, or for repair and modernization, the payment of hospital and doctor bills, financing a trip to Florida or the West Coast or for any other consumption purpose.

Although commercial banks have for years extended consumer loans in small amounts, such lending was for the accommodation of good bank customers and the total of such loans constituted a negligible part of the banks' lending business. As late as 1929, there were "probably fewer than 200 operating consumer credit departments" in commercial banks in the United States.¹ By 1938, according to a study published by the National Bureau of Economic Research,² it was estimated that some 1500 commercial banks had personal loan departments and that, through branches of some of these banks, somewhere near 3000 offices were extending this type of loan. It was also estimated that the amount of credit extended at the end of 1938 was in the neighborhood of half a billion dollars and that the number of borrowers served during that year was between 1,000,000 and 1,500,000.

Consumer loans by the commercial banks increased substantially to the end of 1941, fell off during the war period as a result of wartime credit restrictions, then again increased rapidly. By June 29, 1946, consumer installment loans of insured commercial banks totaled \$1,272 million while single-payment consumer loans amounted to \$1,798 million on the same date.³ These two groups of consumer loans combined constituted about 11 per cent of total commercial bank loans and can no longer be considered a negligible item.

Should commercial banks grant consumer loans? In the past, the author has taken the position that, except in rare

¹ Baird, F., *Commercial Bank Activity in Consumer Instalment Financing*, *Federal Reserve Bulletin*, March 1947, p. 264.

² J. M. Chapman and Associates, *Commercial Banks and Consumer Instalment Credit*, p. 3.

³ Baird, F., *op. cit.*, p. 269. By the end of 1946, consumer installment loans had increased to 1,790 million dollars while single-payment loans had increased by about 200 million dollars. See *Federal Reserve Bulletin*, March 1947, p. 322.

cases, commercial banks should leave the personal loan business to specialized credit agencies. As the consumer loan business has been developed, however, this position is open to question, at least to a considerable degree.

Taking the country as a whole, about half of the consumer loans of the commercial banks consists of installment loans, and, of this type of loan, nearly 60 per cent consists of retail automobile paper and other retail paper and repair and modernization loans. The purpose of such loans is to finance the distribution of goods to the final consumer.

The following table indicates the rapid growth of consumer installment loans since the war.

TABLE 18
CONSUMER INSTALLMENT LOANS
(Estimates. In millions of dollars)

Year	<i>Loans made by principal lending institutions (during period)</i>				
	<i>Com- mercial banks</i> ¹	<i>Small loan com- panies</i>	<i>Indus- trial banks</i>	<i>Indus- trial loan com- panies</i>	<i>Credit unions</i>
1938	460	664	238	176	179
1939	680	827	261	194	257
1940	1,017	912	255	198	320
1941	1,198	975	255	203	372
1942	792	784	182	146	247
1943	639	800	151	128	228
1944	749	869	155	139	230
1945	942	956	166	151	228
1946	1,793	1,251	231	210	339

¹ Figures include only personal installment cash loans and retail automobile loans, and a small amount of other retail direct loans not shown separately.

Source: *Federal Reserve Bulletin*, March 1947, p. 322.

A case can be made for the propriety of this type of consumer loan by the commercial bank. If an installment furniture house, for example, borrows from the bank to finance its inventory and receivables, the loan would be considered as a

strictly commercial or business loan. If the bank lends to the consumer to buy furniture, so that the furniture house sells for cash, the bank is still financing the sale of the furniture as before. The technique may be different, but the fundamentals of the transaction are the same.

It is probable that a large proportion of the single-payment consumer loans are of similar nature. If a person has a definite amount outside his regular income coming in at some date later in the year, he may very well wish to anticipate the receipt of this payment by borrowing at the bank and expending the proceeds of the loan for goods. Under these circumstances, a single-payment loan would be more convenient than an installment loan.

Whether or not one approves of the development of consumer lending by the commercial banks, this type of business has reached a point where it cannot be lightly regarded or passed by with a casual comment. Since a specialized technique is required in the extension of loans to consumers, this type of business, when at all extensively engaged in, should be carried on by a specialized personal loan department with a personnel equipped to handle the particular problems involved in lending to consumers.

BUSINESS LOANS

Types of business loans.—Prior to the great depression, business loans of the banks consisted almost entirely of working capital loans of a self-liquidating variety with nominal maturities of from 30 days to 6 months, generally referred to as commercial loans. These loans were largely unsecured. As of June 30, 1928, the Comptroller of the Currency reported unsecured loans of national banks of \$7,098,455,000 as compared with \$1,476,442,000 of loans secured by warehouse receipts, bills of lading covering goods in process of shipment, etc., the latter being of a strictly commercial character.

At present, the proportion of secured loans is somewhat higher, even for short-term loans, than in 1928. Near the end of 1946, a little over one-third of the amount and one-half of the number of business loans maturing within a year were secured. This is indicated by the data in Table 19, which

classifies all business loans of member banks by type of security and original maturity of the loan.

SECURITY PLEDGED ON MEMBER BANK LOANS TO BUSINESS

TABLE 19

BUSINESS LOANS OF MEMBER BANKS, NOVEMBER 20, 1946, BY TYPE OF
SECURITY AND ORIGINAL MATURITY OF LOAN

[Estimates of outstanding loans]

Type of security	All loans	Original maturity of loan						
		Demand	Up to 6 months	6 months to 1 yr.	1-3 years	3-5 years	5-10 years	Over 10 years
Amount of loans, in millions								
Unsecured ¹	\$7,438	\$501	\$3,600	\$502	\$482	\$401	\$1,526	\$237
Secured.....	5,799	1,573	1,867	431	480	170	786	176
All loans ²	13,237	2,074	5,566	1,023	962	571	2,311	413
Secured:								
Endorsed and co-maker.....	706	00	476	55	27	12	27	8
Inventories.....	1,195	620	437	78	28	8	10	4
Equipment.....	706	76	106	63	167	120	132	40
Plant and other real estate...	643	162	116	65	61	143	332	60
Stocks and bonds.....	1,075	261	399	104	104	75	112	10
Accounts receivable.....	100	89	77	10	3	2	4	2
Life insurance.....	148	42	63	10	7	7	8	....
Assignment of claims ⁴	505	121	113	25	55	81	95	15
Government participation or guarantee.....	110	21	31	6	13	16	20	4
Other security.....	212	81	47	8	15	4	27	24
Number of loans, in thousands								
Unsecured.....	261	22	180	24	17	4	4	(³)
Secured.....	410	70	169	53	64	24	25	5
All loans.....	671	93	357	77	81	28	29	6
Secured:								
Endorsed and co-maker.....	76	5	55	9	6	1	(³)	(³)
Inventories.....	35	13	18	2	1	(³)	(³)	(³)
Equipment.....	111	8	25	26	42	7	3	(³)
Plant and other real estate...	77	12	13	6	7	14	20	5
Stocks and bonds.....	46	13	28	3	2	1	(³)	(³)
Accounts receivable.....	13	5	7	1	(³)	(³)	(³)	(³)
Life insurance.....	22	6	10	3	1	(³)	(³)	....
Assignment of claims ⁴	22	6	10	2	3	(³)	1	(³)
Government participation or guarantee.....	2	(³)	(³)	(³)	(³)	(³)	1	(³)
Other security.....	6	2	2	1	1	1	(³)	(³)

¹ Includes a small quantity of loans for which no information regarding type of security has been given.

² A small quantity of loans unclassified by original maturity of loan has not been shown separately.

³ Less than 500 loans.

⁴ Including oil runs.

Note.—Detailed figures may not add to totals because of rounding.

Source: *Federal Reserve Bulletin*, June 1947, p. 680.

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About the middle thirties, the commercial banks began to engage in lending of a new type, generally now referred to as term lending. Term loans to business have been so defined as to embrace the following characteristics: "(1) credit extended to a *business* concern; (2) a direct relationship between borrower and lender; (3) provision at time of making the loan that some part of the principal is repayable *after* the passage of one year."⁴ More will be said of this type of loan later in the chapter. Here it may be merely noted that the volume of such lending by commercial banks increased from an estimated \$827 million at the close of 1937⁵ to more than \$4.5 billion near the end of 1946.⁶ The latter figure amounted to 34.4 per cent of all member bank loans to business on the date in question.⁷

Other types of loans to business are loans secured by field warehouse receipts and loans for financing the purchase of industrial and commercial equipment by business concerns.⁸ The former are largely short-term commercial loans, the latter, in many cases, term loans of an installment type. Although they present certain special problems, they will not receive detailed separate treatment in this chapter.

The instruments of bank credit to business.—When the bank extends credit to a business borrower, the evidence of the latter's indebtedness to the bank may take one of three forms. First, the borrower may give the bank his own promissory note, secured or unsecured. Second, he may endorse and turn over to the bank promissory notes that he has received from customers who have purchased his goods on time. Third, he may discount at the bank trade acceptances that have been given him by customers purchasing his goods.

The first of these types, the borrower's own single-name promissory note, is by far the most commonly used instrument in obtaining commercial loans from the banks in this country. A specimen, showing the form of the note used, is given in Figure 5 (p. 51). The wide use of the single-name

⁴ See Jacoby, N. H., and Saulnier, R. J., *Term Lending to Business*, p. 9.

⁵ *Ibid.*, p. 30.

⁶ *Federal Reserve Bulletin*, May 1947, p. 513.

⁷ *Ibid.*, p. 503.

⁸ For detailed analyses of these two types of loans, see Jacoby, N. H., and Saulnier, R. J., *Financing Inventory on Field Warehouse Receipts*, and Saulnier, R. J. and Jacoby, N. H., *Financing Equipment for Commercial and Industrial Enterprise*.

note in the United States is an outgrowth of conditions existing during and after the Civil War. The fluctuating value of the currency in that period made it extremely desirable for sellers to obtain cash payments for their goods. They hence arrived at the device of extending credit to customers on open book account, while at the same time offering heavy discounts for immediate or practically immediate payments in cash. The system of trade credit thus established—the open account with cash discount—has been widely retained by sellers to the present day. Each trade has its normal credit period, as 30, 60, or 90 days, and offers its regular discount for payments in cash within a comparatively few days' time. The buyer gives no obligation of his indebtedness, the seller merely charging his account with the amount of the purchase. Although accounts receivable may be discounted or purchased by the bank, the cost to the businessman is apt to be high, and the borrower, where his credit standing permits, prefers to obtain credit on the basis of his own promissory note.

In some few lines of business, usually where the credit period allowed is rather extended, it is the custom for the buyer of goods to give his promissory note to the seller for the amount of the bill. Such notes may then be endorsed and discounted at the bank by the seller, which gives rise to what is known as *double-name business paper*. According to Foulke and Prochnow, "today, there are only two lines of business activity in which it is customary practice to settle trade obligations by giving notes: the jewelry and fur trades." Although terms of settlement are usually on an open account basis, in the leaf tobacco trade and the manufacture of automobile tires notes are also often used.⁹ This type of paper is therefore not an important type of trade credit instrument.

The third type of trade credit instrument is the trade acceptance, a specimen form of which is shown in Chapter 3, page 52. The trade acceptance represents a definite sale of goods. Theoretically, it has several advantages over the open book account. It is a definite legal instrument, representing a short-term strictly self-liquidating transaction. Where used, the buyer is apt to pay maturing acceptances promptly in order to preserve his credit standing and, because of this, is

⁹ Foulke, R. A., and Prochnow, H. V., *Practical Bank Credit*, p. 432.

forced to maintain prompt collection of his own receivables. Because of prompt payment of bills he has accepted, the buyer may get a somewhat better price from the seller.

In spite of these advantages, as well as of many efforts on the part of the Federal Reserve authorities and others to popularize the use of this instrument of trade credit, there has been no wide use of the trade acceptance. The open book account remains, and will probably continue to remain, the most popular method of extending trade credit in the United States.

In the extension of term credit by the banks to business some form of the promissory note of the borrower is used. It may be a single-payment note or it may consist of a series of notes or a note payable in installments, and, although sometimes endorsed, most of the notes are of the single-name variety.

Commercial loans.—We shall consider as commercial loans, those loans to business for working capital purposes with a maturity of less than one year. This is the typical commercial loan of orthodox commercial banking theory. In some seasonal businesses, borrowers require accommodation from the bank only for a short time once or twice a year. In other lines of business, non-seasonal in character, notes must be renewed or new notes discounted as soon as an existing note has matured. As long, however, as the sale of the borrower's product has proceeded at a pace that has produced enough cash to retire the loan at maturity, such a loan falls within the present classification even though a new loan must be granted immediately in order to permit the borrower to repeat the process.

The bank credit department.—Since most commercial loans are unsecured, it is essential that the bank protect itself by making a thorough investigation of the borrower's credit position. Such investigations are carried out by the bank's credit department. In the early days of the century, only the larger commercial banks maintained such specialized departments. Today, the practice is general, even the smaller banks having at least one man who is responsible for this particular task, while the large banks have departments of considerable size equipped to perform this function.

Credit analysis.—Space does not permit any extended discussion of the analytical work of the credit department. Nevertheless, a cursory description of the methods used will be presented as serving to illustrate the usefulness of this department to the bank management.

In determining the credit worth of a customer who wishes to borrow without security, the bank credit department is concerned with what have been termed *the three C's of credit*—the borrower's character, capacity, and capital. With regard to character, the analyst must depend upon such intangible, or at least qualitative, information as the borrower's reputation in the community for financial integrity, commendable habits, and other good qualities. This information is comparatively easy to obtain and is valuable to the banker so far as it goes.

Capacity is a quality that is likewise difficult to rate quantitatively and the borrower's general reputation for ability in business affairs may have to suffice. If, however, the credit department is able to obtain income accounts and statements of condition of the borrower's business for a fairly long period of successive years, much valuable information about his capacity may thereby be revealed.

Concerning capital, the credit department is able to obtain the most detailed information through the analysis of the bank borrower's statement and, if obtainable, his income account. The standard A.B.A. form for corporations is presented in Fig. 13. Somewhat more condensed forms are available for individual business borrowers. In analyzing the statement, the banker is interested in finding out, first, what are the prospects of repayment of the loan at maturity, and second, if the loan is not paid at maturity, what are the chances of its ultimate payment? The first question is answered by an examination of the quick assets and current liabilities of the prospective borrower, and the second by reference to the permanent assets and long-term liabilities.

Since the banker would not grant a loan that he did not expect to be paid at maturity, attention is naturally focussed on the relation between the current assets and liabilities while the slow assets and long-time debt are of secondary significance. Accordingly, the borrower's statement, ordinarily

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[illegible]

FIG. 12. CORPORATION FINANCIAL STATEMENT

NORTHWEST LIABILITIES				CALCULATOR FOR OTHERS USE			
NOTES RECEIVABLE, TRADE ACCEPTANCES OR DRAFTS DISCOUNTED OR SOLD.				NOTES ACCOUNTS OR CONTRACTS MAXIMUM LIABILITY FOR PROPOSED ADDITIONAL INCOME TAXES.			
CUSTOMERS' ACCOUNTS DISCOUNTED OR SOLD.				BONDS OR UNFINISHED CONTRACTS.			
CUSTOMERS' ACCOUNTS ASSIGNED OR PLEDGED ACCOMMODATION PAPER ENDORSEMENTS OR NOTES EXCHANGEABLE WITH OTHERS.				PURCHASE COMMITMENTS OUTSTANDING.			
				LITIGATION IN PROCESS OR THREATENED.			
				OTHER CONTINGENT LIABILITIES.			

STATEMENT OF PROFIT AND LOSS							
FOR THE PERIOD BEGINNING				AND ENDING			
GROSS SALES				TOTAL ADMINISTRATIVE, GENERAL AND SELLING EXPENSES			
LESS: RETURNS AND ALLOWANCES				OPERATING PROFIT			
NET SALES				OTHER INCOME			
COST OF GOODS SOLD				INVESTMENTS			
TOTAL INVENTORIES AT BE-				CASH DISCOUNTS RECEIVED			
GINNING OF PERIOD				RECOVERIES FROM NOTES AND ACCOUNTS PREVIOUS- LY CHARGED OFF			
ADD PURCHASES DURING PERIOD				OTHER			
FOR WHICH:				TOTAL			
Partners	DIRECT LABOR			OTHER EXPENSES			
Only	DEPRECIATION			INTEREST			
	OTHER ACTIVITY			CASH DISCOUNTS GIVEN			
	OVERHEAD			OTHER			
TOTAL				TOTAL			
DEDUCT TOTAL INVENTO-				NET PROFIT OR LOSS			
RIES AT CLOSE OF PERIOD				BEFORE INCOME TAXES			
GROSS PROFIT				ACCUMULATED FEDERAL INCOME TAXES			
SELLING EXPENSES				ACCUMULATED STATE INCOME TAXES			
SALARIES				TOTAL			
COMMISSIONS				NET PROFIT OR LOSS CARRIED TO SHEET 2			
TRAVELING							
ADVERTISING							
TOTAL							
ADMINISTRATIVE AND GENERAL EXPENSES							
OFFICERS' SALARIES							
OTHER SALARIES							
RENT							
UTILITIES AND ACCOUNTS CHARGED OFF							
DEPRECIATION							
(NOT APPLICABLE TO ALL)							
TOTAL							

RECONCILIATION OF EARNED SURPLUS				RECONCILIATION OF CAPITAL SURPLUS			
EARNED SURPLUS AT CLOSE OF PREVIOUS FISCAL YEAR				CAPITAL SURPLUS AT CLOSE OF PREVIOUS FISCAL YEAR			
ADD: NET PROFITS (FROM PROFIT & LOSS STATEMENT)				ADDITIONS (OTHER)			
OTHER ADDITIONS (OTHER)				TOTAL ADDITIONS			
TOTAL ADDITIONS				DEDUCTIONS (OTHER)			
LESS: DIVIDENDS PAID				TOTAL DEDUCTIONS			
CASH - PREFERRED, RATE _____%				CAPITAL SURPLUS AT END OF PERIOD (SEE BALANCE SHEET)			
COMMON, RATE _____%							
STOCK - PREFERRED, RATE _____%							
COMMON, RATE _____%							
OTHER DEDUCTIONS (OTHER)							
TOTAL DEDUCTIONS							
EARNED SURPLUS AT END OF PERIOD (SEE BALANCE SHEET)							

WAS AN AUDIT MADE? _____ NAME OF INDEPENDENT ACCOUNTANTS: _____

THE FISCAL PERIOD OF THIS CORPORATION CLOSING ON THE _____ DAY OF _____

BANK ACCOUNTS			
NAME AND LOCATION OF BANK	CASH BALANCE	CREDIT LINES	AMOUNT OF LOANS ON WHAT BASIS? (ENDORSEMENTS, RECEIVABLES, COLLATERAL, ETC.)
	\$	\$	\$

FIG. 13. (Cont'd).

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NOTES AND TRADE ACCEPTANCES RECEIVABLE <small>— Customers Only (excluding those from aMates)</small>				ACCOUNTS RECEIVABLE <small>— Customers Only (excluding those from aMates)</small>																																																																																										
NOT DUE _____ RENEWAL _____ PART DUE AND PROTESTED _____ TOTAL NOTES AND TRADE ACCEPTANCES RECEIVABLE _____ LESS: RESERVE FOR DOUBTFUL _____ NOTES AND TRADE ACCEPTANCES RECEIVABLE, NET _____ AMOUNT CONSIDERED OF SLOW COLLECTION _____ AMOUNT CONSIDERED OF DOUBTFUL COLLECTION _____				ACCOUNTS CHARGED WITHIN: 30 DAYS _____ 31 TO 60 DAYS _____ 61 TO 90 DAYS _____ 3 TO 6 MONTHS _____ OVER 6 MONTHS _____ TOTAL ACCOUNTS RECEIVABLE _____ LESS: RESERVE FOR DOUBTFUL ACCOUNTS _____ ACCOUNTS RECEIVABLE, NET _____ AMOUNT OF ACCOUNTS CONSIDERED DOUBTFUL _____ SELLING TERMS _____																																																																																										
MERCHANDISE MERCHANDISE ON HAND _____ " CONSIGNED TO OTHERS _____ " IN TRANSIT _____ TOTAL _____ LESS: RESERVES (IF ANY) _____ TOTAL AS PER STATEMENT _____				1. AMOUNT OF MERCHANDISE PLUGGED _____ 2. IS MERCHANDISE CONSIGNED TO YOU INCURRED IN ASSUMPT _____ 3. AT WHAT TIME OF YEAR IS INVENTORY HIGHEST? _____ LOWEST? _____ 4. AVERAGE AMOUNT OF INVENTORY _____ 5. DOES INVENTORY REPRESENT PHYSICAL COUNTS? _____ WHEN TAKEN _____ 6. DESCRIBE IN DETAIL THE BASIS OF VALUATION _____ 7. STATE THE EXTENT OF ACCOUNTANTS' VERIFICATION, IF ANY _____ 8. GIVE DATE (OR DATE) IN WHICH INVENTORY IS TAKEN AND BOOKS ARE CLOSED _____																																																																																										
SECURITIES OWNED <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>FACE VALUE (GROSS) LESS COMMISSIONS</th> <th>NUMBER OF SHARES (STOCKS)</th> <th>DESCRIPTION OF SECURITIES</th> <th>COST</th> <th>PAYMENT BOOK VALUE</th> <th>MARKET VALUE</th> <th>UNPAID DIVIDENDS (LAST YEAR)</th> <th>NO. UNPAID PLEDGED</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>							FACE VALUE (GROSS) LESS COMMISSIONS	NUMBER OF SHARES (STOCKS)	DESCRIPTION OF SECURITIES	COST	PAYMENT BOOK VALUE	MARKET VALUE	UNPAID DIVIDENDS (LAST YEAR)	NO. UNPAID PLEDGED																																																																																
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ARE ALL SECURITIES OWNED REGISTERED IN THE NAME OF THE CORPORATION? _____ DUE FROM SUBSIDIARIES AND AFFILIATES <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NAME OF COMPANY</th> <th>LOCATION</th> <th>FOR ADVANCE</th> <th>OTHER DUE</th> <th>FOR MERCHANDISE</th> <th>TERMS</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>							NAME OF COMPANY	LOCATION	FOR ADVANCE	OTHER DUE	FOR MERCHANDISE	TERMS																																																																																		
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		ENCLAVE	NATURAL																																																																																											
THE LEGAL AND EQUITABLE TITLE TO ALL THE REAL ESTATE LISTED ABOVE IS SOLELY IN THE CORPORATION'S NAME, EXCEPT AS FOLLOWS: _____ IF BOOK VALUE (BEFORE DEPRECIATION RESERVE) HAS DECREASED DURING THE YEAR, STATE REASON: _____																																																																																														
LIFE INSURANCE <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>NAME OF PERSON INSURED</th> <th>TYPE OF POLICY</th> <th>FACE AMOUNT OF POLICY</th> <th>TOTAL CASH SURPLUS VALUE</th> <th>TOTAL LOANS AGAINST POLICY</th> <th>TO WHOM POLICY IS ASSIGNED</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>							NAME OF PERSON INSURED	TYPE OF POLICY	FACE AMOUNT OF POLICY	TOTAL CASH SURPLUS VALUE	TOTAL LOANS AGAINST POLICY	TO WHOM POLICY IS ASSIGNED																																																																																		
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FIG. 13. (Cont'd).

BOND ISSUES (describe each issue separately)				
DESCRIPTION OF ASSETS (INCLUDING CURRENT ASSETS, IF ANY) PLEDGED TO SECURE BOND ISSUES				
SUMMARY OF INDENTURE PROVISIONS, INCLUDING SINKING FUND REQUIREMENTS:				
THERE ARE NO DEFAULTS IN CONNECTION WITH ANY OF THE PROVISIONS OF THE INDENTURES, EXCEPT AS FOLLOWS:				
NAME AND ADDRESS OF TRUSTEES:				
CAPITAL STOCK				
PREFERRED	\$ PAR VALUE	\$ CUMULATIVE	SUMMARY OF PREFERRED STOCK PROVISIONS	
AUTHORIZED				
UNISSUED				
OUTSTANDING				
COMMON	\$ PAR VALUE		VOTING POWERS OF PREFERRED STOCKHOLDERS	
AUTHORIZED				
UNISSUED				
OUTSTANDING			AMOUNT OF PREFERRED STOCK DIVIDENDS ACCUMULATED AND UNPAID	
COMMON: NO PAR VALUE—SHARES OUTSTANDING			REPRESENTING A PERIOD OF	
LIABILITY INSURANCE (underwrite, issue, reinsure, etc., as applicable)				
NAME AND ADDRESS OF INSURANCE COMPANY	TYPE OF POLICY	AMOUNT OF COVERAGE	POLICY NUMBER, ETC.	EXPIRATION DATE
OTHER INSURANCE				
FIRM	PROPERTY OR	NATURE	AMOUNT	DATE
=	MERCANDISE			
=	BUILDINGS			
=	MACHINERY AND EQUIPMENT			
=	FURNITURE AND FIXTURES			
=	TRUCKS, AUTOS, WAGONS, ETC.			
CREDIT	ACCOUNTS AND NOTES RECEIVABLE			
UT. AND OR				
FIDELITY				
BOND				
OFFICERS				
	NAME IN FULL	NUMBER OF YEARS HELD	ANNUAL COMPENSATION	ADDRESS
PRESIDENT				
VICE-PRES.				
VICE-PRES.				
SECRETARY				
TREASURER				
DIRECTORS				
	NAME IN FULL	NUMBER OF YEARS HELD	ANNUAL COMPENSATION	ADDRESS
IN SUBMITTING THE FOREGOING STATEMENT THE UNDERSIGNED GUARANTEES ITS ACCURACY WITH THE INTENT THAT IT BE RELIED UPON BY THE AFORESAID BANK IN EXTENDING CREDIT TO THE UNDERSIGNED AND WARRANTS THAT _____ HAS NOT KNOWINGLY WITHHELD ANY INFORMATION THAT MIGHT AFFECT _____				
PRIVILEGE AND THE UNDERSIGNED EXPRESSLY AGREES TO NOTIFY IMMEDIATELY SAID BANK IN WRITING OF ANY MATERIAL CHANGE IN _____ FINANCIAL CONDITION WITHIN TEN DAYS AFTER THE DATE OF SUCH CHANGE OR NOT IN THE ABSENCE OF SUCH WRITTEN NOTICE IT IS HEREBY AGREED THAT SAID BANK IN GRANTING NEW OR CONTINUING CREDIT MAY RELY ON THIS STATEMENT AS HAVING THE SAME FORCE AND EFFECT AS IF DELIVERED UPON THE DATE ADDITIONAL CREDIT IS REQUESTED ON EXISTING CREDIT EXTENDED ON CONTINUING.				
SIGNED AT _____		SIGNATURE OF CORPORATION _____		
THIS _____ DAY OF _____ 19____		OFFICER _____		
		TITLE _____		

FIG. 13. (Cont'd).

submitted on a form furnished by the bank, is arranged in the fashion indicated in the accompanying form, with the assets listed in the order of their liquidity and the liabilities in order of their maturity. Before examining briefly each of the items listed, it will be desirable to consider the theoretical basis of the analysis of the bank borrower's statement.

The borrower wishes to obtain funds to supplement his working capital, that is, to assist in the manufacture or purchase and sale of goods. If such a loan is granted, the bank wishes to ascertain, so far as possible by an analysis of the borrower's statement, the probability of the loan's payment at maturity. The current assets show the amount of cash on hand, the amount of receivables that will shortly turn into cash, and the amount of inventory that will turn first into receivables and then into cash. To the cash received from the sale of goods and the collection of receivables the bank must look for the repayment of its loan. But the current liabilities, such as accounts, notes and/or acceptances payable, must also be paid out of the same source. The banker is therefore desirous of knowing whether there is a sufficient excess of current assets over current liabilities to insure, other things being equal, the repayment of his loan. The ratio of current assets to current liabilities—known as the current ratio—is therefore of considerable importance in the analysis of the borrower's statement.

It goes without saying that a correct appraisal of the significance of the current ratio depends upon an accurate estimate of the individual items that enter into the asset and liability sides of the statement. Cash should be checked to see that it is accurately reported and that it forms a suitable proportion of the quick assets. Unless the borrower's business is one of those in which the promissory note is used, the amount of notes receivable should be small since any considerable volume of notes is indicative of slow or uncollectible accounts. Accounts receivable will be the most important receivables item in the ordinary lines of business, and the analyst should use care to ascertain that a sufficiently liberal allowance for losses on bad debts has been set aside on this item. If acceptances are used, this allowance may properly be smaller.

Inventory presents many technical difficulties of valuation that cannot be taken up here. Merchandise inventory is conservatively valued at cost or market price, whichever is lower. In the case of a manufacturing concern, raw materials may be valued at cost, goods in process preferably at cost of the raw materials contained therein, and finished goods at total cost not including any item of selling expense. Attempts should be made to ascertain the freshness and salability of merchandise and to make sure that unsalable goods have been charged off.

Prepayments or deferred assets may properly be considered as current, although they have no liquidating value in the event of failure. Marketable stocks and bonds or commercial paper, when held by a business concern as a temporary investment, are also quick assets of high quality, but if held in large amounts such securities should normally be sold by the borrower to obtain working capital in place of borrowing at the bank.

The slow assets are of chief importance in case of failure, and should be accordingly valued conservatively on a liquidation basis.

The current liabilities require little comment. They should be examined carefully to see that they are accurately and completely reported, that accounts payable are not past due, and that notes payable do not appear in significant amounts except in the case of businesses in which the promissory note is normally used. If bond interest or the repayment of bond principal is due within the current operating period, it should be known that proper measures have been taken to provide for these payments. The slow liabilities are of interest in showing the extent of the bonded or mortgage indebtedness, as indicating both the claims of creditors against the property of the borrower and the amount of current income necessary for the payment of interest on the debt. Depreciation should also be considered to see whether a proper allowance is being made to preserve the capital intact and to determine the validity of the profits figures that are reported by the borrower.

The current ratio.—Having determined the accuracy of the individual items on the statement, the banker is in a

position to examine significant ratios and relationships. Of these, the current ratio is of prime importance since it indicates the excess of current assets over current liabilities. The chief question arising in this connection is how high should the current ratio be? The only answer that can be given to this question is: High enough to insure the payment of the borrower's liabilities, including his debt to the bank, as they come due. "From this standpoint, it is clear that an installment furniture house, whose receivables are payable in installments running over a period of many months and whose turnover of merchandise inventory is relatively slow, must have a large amount of quick assets in proportion to current liabilities to provide a sufficient income of cash to take care of current maturities among the liabilities. That is to say, the installment house would have to have a relatively high current ratio. On the other hand, a flour mill, which sells largely for cash, or at least on only short time, and which turns its inventory rapidly, would not need relatively as large an amount of quick assets to provide sufficient cash to meet the current maturities among its liabilities. That is, a lower current ratio would be in order."¹⁰

In a seasonal business, the date upon which the statement was rendered would be of significance. "The statement of a wholesale milliner, for example, will usually show an exceedingly high ratio as of about November 30th, and may show a ratio of considerably less than two for one as of the end of March. . . November is an end-of-season month, when the business should be in a very liquid condition and have most of its liabilities paid off; whereas March is in the midst of the busy spring season, when the milliner is leaning heavily upon his creditors."¹¹

While it is usually considered that a ratio of two to one is satisfactory, the foregoing quotations should indicate that this may not always be the case. The proper ratio will vary from this assumed norm depending upon the nature, turnover, and seasonality of the business under consideration. The bank credit man needs more than this simple rule of thumb properly to estimate the significance of the current

¹⁰ Schwulst, E. B., *The Extension of Bank Credit*, p. 43.

¹¹ *Ibid.*, p. 15.

ratio. A precise knowledge of the business in question is essential.

The turnover of receivables.—The turnover of receivables is found by dividing the annual net credit sales figure by the net receivables. The resultant quotient, when divided into 360 or 365 days, will give the average collection period. Thus, suppose that the net receivables figure goes into the annual net credit sales figure six times. Dividing this into 360 gives 60 days as the average collection period. This figure may then be compared with the borrower's terms of sale, and the comparison will indicate whether collections are being maintained by the borrower at the proper rate. A figure of 75 days for the average collection period when the borrower is selling on 60-day terms would indicate a lagging in collections that would not appeal to the bank credit man.

Obviously, the figure for net receivables should represent the yearly average. In a highly seasonal industry half or more of the receivables for the year may be on the books at a particular time. Net receivables taken from a statement submitted at such a time would, if used, clearly give a highly distorted figure for the average collection period.

Inventory turnover.—The turnover of merchandise inventory is found by dividing the net sales for the year at cost by the average annual inventory. If the average annual inventory is not obtainable, the figure from the statement will have to be used and allowance must then be made for seasonal variation in the business. The figure for merchandise inventory turnover, when compared with what is normal in the particular line of trade in question, gives a good indication of the efficiency of the borrower. Too slow a turnover means decreased profits and undue reliance on the banks for credit accommodation.

Debt to capital or net worth.—The bank credit man will also be interested in the ratio of debt to capital or net worth. Just what the proportion should be depends largely upon the nature of the business. "A business with slow turnovers and handling non-staple commodities should depend relatively less upon creditors than a business not subject to those disadvantages. Then the season of the year is very important. The cotton merchant, for example, should be practically out

of debt in mid-summer; whereas in November or December his borrowings may run far in excess of his net worth.¹² The wholesale produce dealer should reduce his indebtedness very materially during the spring and summer, but might owe quite heavily during the fall and winter. In general, it might be said that if the indebtedness exceeds from seventy to eighty per cent of the net worth the banker should inquire into the cause. If a large part of the debt is of a fixed or slow nature, a high proportion is not so serious as it would be if all the indebtedness were current. It should also be stated that the smaller the concern the lower the ratio of debt to worth should be, because small concerns are shorter lived on the average than large ones, and, from the very fact that they are small, they are less able to weather the storms constantly to be encountered in every field of competitive economic activity."¹³

The banker is concerned to a lesser extent with the analysis of the assets and liabilities of a failing, than of a going, concern. He cannot, however, ignore the possibility of failure, and so examines the assets and indebtedness with a view to ascertaining the ability of the borrower's business, in liquidation, to furnish ultimate repayment of the loan. The assets are considered from this point of view by what they would bring under forced liquidation. If the loan is to be granted, the liquidating value of the assets should be sufficient to insure the eventual repayment of the loan in the event of failure.

The income account.—Whenever possible the bank credit man should obtain the borrower's income account as well as the statement of his business condition. The former will furnish him information concerning salaries, cost of materials, depreciation, insurance, losses, profits, and dividends that are of great value in estimating the credit risk. When an income account is not obtainable, various significant items such as sales, insurance, etc., should be required to supplement the information contained in the statement alone. It will be noted that on the second page of the form reproduced

¹² "It should be stated, however, that his borrowings will probably be secured by cotton."

¹³ Schwulst, *op. cit.*, p. 17.

earlier in the chapter, what amounts to an income account statement is required. Less inclusive information is required in the simpler individual form, but, even there, the more important items in the income account are requested.

It must be emphasized that the foregoing analysis is extremely sketchy and is intended only to indicate the general principles involved. Other ratios than those mentioned should be considered and many details not mentioned above must be examined. Mr. Roy A. Foulke has worked up data for fourteen important ratios, all of which have some use in credit analysis.¹⁴ It is obvious, then, that capable credit analysis is not as simple as the brief discussion in the present chapter might indicate.

Other sources of information.—Although depending largely on the type of analysis just sketched, the credit man also gets information from any other possible source. Mercantile agencies, other banks, trade credit men, etc., are relied upon in various degrees, and the personal interview with the borrower still plays a part and often elicits useful information. In short, the efficient credit department will leave no stone unturned in securing any data that will materially assist it in its analyses.

Term loans.¹⁵—As indicated earlier in the chapter, term loans are direct bank loans to business having a maturity of more than one year. The growth of this type of lending since the middle thirties to a point where more than one-third of the business loans of member banks are of the term variety makes a fairly detailed discussion of term lending desirable. We shall here consider term loans from the points of view of (1) use of proceeds, (2) type of borrower, (3) maturities, (4) methods of repayment, (5) security, and (6) interest charged. This will be followed by a discussion of the desirability of term lending by commercial banks.

¹⁴ R. A. Foulke, *The Balance Sheet of the Future*, Dunn & Bradstreet, Inc., 1941. For a highly detailed study of credit analysis see an excellent piece of work, *Practical Bank Credit*, by R. A. Foulke and H. V. Prochnow.

¹⁵ The Board of Governors of the Federal Reserve System has made a complete study of business loans of member banks as of November 20, 1946. The results of this study relating to term loans appeared in an article in the Federal Reserve Bulletin for May 1947, *Term Lending to Business by Commercial Banks in 1946*, by D. McC. Holthausen. Unless otherwise noted, information contained in this section of the chapter is from the text or tables of the article referred to.

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Use of proceeds.—Term lending is a “specialized type of lending designed to fit the particular needs and requirements of individual borrowers.” This being the case, the proceeds of such loans are used for a variety of purposes. In some instances the loans are wanted to augment working capital. In other cases, the funds are desired for investment in machinery or other capital assets.¹⁶ Although the nature of the security for term loans, when security is required, gives some slight indication of the use to which the funds are put, no exact division of term loans into working capital and fixed capital loans is reported. It seems reasonable to infer, however, that a large share of the proceeds of term loans is used for investment purposes, especially among the loans of longer maturity.

Type of borrower.—The type of borrower obtaining term credit from member banks is best revealed in Table 20, on page 366. It is to be observed from the data in this table that while more than four-fifths of the amount of term loans outstanding on November 20, 1946, had been made to corporations, almost six-sevenths of the number of such loans were to unincorporated enterprises. Since unincorporated businesses are usually those of small size, the aid to small business through term lending is apparent.

Further indication of the importance of term lending to small business is indicated by the data on term loans grouped according to the size of the borrower, whether incorporated or unincorporated. Out of 79.5 thousand term borrowers organized in 1942 or before, 48.2 thousand had assets of less than \$50,000. Of the 62.4 thousand term borrowers organized after 1942, 56.8 thousand had less than \$50,000 of total assets.

The nature of the business of term borrowers is made clear by the data in Table 20. Among the unincorporated borrowers, those engaged in retail trade, wholesale trade, and the service occupations accounted for two-thirds of the number of term

¹⁶ According to the study made by Jacoby and Saulnier, in June 1941 “about 54 per cent (of term credit) is used exclusively for refunding purposes, chiefly to retire bonds.” *Op. cit.* p. 4. The proportion used for this purpose is now much less, although notes of public utilities “payable to banks on a term basis, used in substantial part for refunding purposes, included one-fifth of the dollar volume and one-eighth of the number of term loans” in 1946. Holthausen, *op. cit.*

loans. The corresponding proportion for incorporated term borrowers was only one-third. This is natural as retail trade and service occupations bulk large among unincorporated enterprises.

TABLE 20

TERM LOANS OF MEMBER BANKS TO BUSINESS, NOVEMBER 20, 1946, BY
BUSINESS AND CORPORATE STATUS OF BORROWER

[Estimates of outstanding loans]

Business of borrower	Incorporated	Unincorporated	Incorporated	Unincorporated
<i>Amount of loans</i>				
	<i>In millions</i>		<i>Percentage distribution within each business group</i>	
Retail trade	\$ 192	\$216	47.1	52.9
Wholesale trade	158	67	70.3	29.7
Manufacturing and mining,	2,158	214	91.0	9.0
Food, liquor, and tobacco	366	25	93.6	6.4
Metals and metal products	655	57	92.0	8.0
Petroleum, coal, chemicals, and rubber	679	80	89.4	10.6
All other manufacturing and mining	457	51	89.9	10.1
Public utilities (including transportation companies)	873	86	91.1	8.9
Services	121	112	51.9	48.1
All other	215	145	59.8	40.2
All term borrowers ¹	\$3,718	\$839	81.6	18.4
<i>Number of loans</i>				
	<i>In thousands</i>		<i>Percentage distribution within each business group</i>	
Retail trade	4.0	49.9	7.4	92.6
Wholesale trade	2.2	7.6	22.7	77.3
Manufacturing and mining,	7.8	13.3	37.1	62.9
Food, liquor, and tobacco	1.0	1.6	38.9	61.1
Metals and metal products	2.7	3.3	45.0	55.0
Petroleum, coal, chemicals, and rubber	1.3	1.3	48.6	51.4
All other manufacturing and mining	2.9	7.1	28.9	71.1
Public utilities (including transportation companies)	4.6	12.2	27.6	72.4
Services	1.8	22.4	7.5	92.5
All other	3.2	15.3	17.3	82.7
All term borrowers ¹	23.7	120.6	16.4	83.6

¹ Excludes a small amount of loans unclassified by business and corporate status of borrower.

NOTE.—Detailed figures may not add to totals because of rounding.

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The size of the term loans made by member banks in 1946 is also indicative of the service furnished to small business by this type of lending. Some 90 per cent of the term loans placed in 1946 were for less than \$25,000. These loans were extended chiefly to enterprises with assets of less than \$250,000 and averaged \$3,700 in size.

For reasons indicated later in the chapter, the wide distribution of term loans among small borrowers has been emphasized in the preceding paragraphs, even though the great bulk of these loans, by amounts, has been concentrated with a comparatively few large borrowers.

Maturities.—The pertinent data concerning the maturity of term loans is presented in Table 21. It is clear from the table on p. 368 that the great bulk of the *number* of term loans granted in 1946 had original maturities of five years or less. Loans maturing in 1–2 years constituted 45.2 per cent of the total number; those maturing in 2–5 years comprised 34.3 per cent of the total. On the other hand, nearly half of the *amount* of term loans placed in this year had maturities of between five and ten years. Less than 4 per cent of the amount and 3 per cent of the number of these loans had maturities exceeding ten years.

Clearly, the banks generally do not care to grant term loans with greater than ten years' maturity. In some cases, the banks have taken notes of borrowers up to ten years' maturity, while insurance companies have purchased the notes of these same borrowers of longer than ten years' maturity.

The large proportion of loans, by number, which have maturities of five years or less—many maturing within two years—might be taken to indicate loans for working capital purposes. This is hardly a safe inference, however, as many items of equipment may be paid for out of earnings over periods of five years or less in length. While the proceeds of many of the shorter-maturity term loans have doubtless been used to acquire working capital, it is improper to assume that a predominant proportion has been used for such purposes.

Methods of repayment.—The methods by which term loans are repaid are various. Taking the member banks as a whole and loans of all types of business, the methods of

TABLE 21

TERM LOANS MADE BY MEMBER BANKS TO BUSINESS, NOVEMBER 1945—NOVEMBER 1946
BY ORIGINAL MATURITY OF LOAN AND SIZE OF BANK 1

Original maturity of loan	Size of bank (Total deposits, in millions of dollars)						Size of bank (Total deposits, in millions of dollars)					
	All banks ²	Size of bank (Total deposits, in millions of dollars)				All banks ²	Size of bank (Total deposits, in millions of dollars)					
		Under 2	2-10	10- 100	100- 500		500 and over	Under 2	2-10	10- 100	100- 500	500 and over
Original amount of loans made In millions												
1-2 years	\$ 592	\$ 5	\$ 47	\$ 98	\$ 120	\$ 312	54.2	2.2	16.0	21.0	9.0	5.2
2-5 years	888	5	93	160	252	388	41.2	1.7	14.8	16.6	5.5	2.5
5-10 years	1,541	7	75	168	307	982	21.0	1.3	7.4	8.6	2.8	0.9
Over 10 years	220	1	11	22	39	147	3.6	0.2	1.2	1.7	0.4	0.1
All term loans ²	\$3,242	\$18	\$217	\$447	\$728	\$1,831	119.9	5.4	39.4	48.8	17.7	8.5
Percentage distribution												
1-2 years	18.3	24.7	21.5	21.0	17.0	17.1	45.2	41.2	40.6	44.9	50.6	59.6
2-5 years	27.4	29.2	38.5	35.7	34.6	21.2	34.3	31.8	37.6	34.1	31.1	29.1
5-10 years	47.5	40.4	34.7	37.6	42.2	53.7	17.5	23.9	18.9	17.6	15.7	10.0
Over 10 years	6.8	5.8	5.3	4.8	5.3	8.0	3.0	3.0	3.0	3.4	2.5	1.3
All term loans ²	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Estimates of term loans made from Nov. 1, 1945 through Nov. 20, 1946 and outstanding on the latter date; excludes that portion of term loans made during this period but paid in full or in part before the date of the survey.

² Excludes a small amount of loans unclassified by maturity of loan and size of bank.

NOTE.—Detailed figures may not add to totals because of rounding.

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repayment, by amount and by number of loans, is shown by the following percentages:

	<i>Amount</i>	<i>Number</i>
Single payment	18.8	6.8
Serial note	13.8	3.1
Equal installment	42.6	84.1
Unequal installment	19.6	5.3
Several notes	5.1	0.6

It is clear that by far the most common method of repayment employed is the equal installment plan. Almost seven-eighths of the number of term loans outstanding near the end of 1946 provided for repayment in a number of equal installments. However, other methods are at times more convenient and are resorted to when agreeable to both the bank and the borrower. One method fairly frequently used is repayment in a series of small installments with a large or "balloon" payment at the end.

The number of single-payment notes is naturally small, about one-fifteenth of the total, but the amount of term loans repayable in one payment is nearly one-fifth of the total amount. Detailed figures show a concentration of single-payment loans in three divisions of the manufacturing and mining group, loans to trade and service groups being predominantly repayable on an equal installment basis.

Security.—Although a much larger proportion of term loans is secured than is the case with short-term commercial loans, unsecured loans still predominate, 58.8 per cent of the term loans outstanding on November 20, 1946, being unsecured. The pertinent data relating to secured term loans is contained in Table 22 (pp. 370-371).

Several interesting items are manifest from the data contained in the table. Loans to small borrowers are largely secured. It will be noted that seven-eighths of the amount of loans made to borrowers with assets under \$50,000 and over nine-tenths of the amount of loans to borrowers with assets between \$50,000 and \$250,000 fall into the secured class. On the other hand, less than one-quarter of the amount of loans to borrowers with assets of \$5,000,000 and over come into the secured group. This is perhaps to be expected. The credit standing of the small borrower is not apt to be as

TABLE 22

TERM LOANS OF MEMBER BANKS TO BUSINESS, NOVEMBER 20, 1946, BY TYPE OF SECURITY AND SIZE OF BORROWER
[Estimates of outstanding loans]

Type of security	All bor- rowers ¹		Size of borrower (Total assets, in thousands of dollars)				All bor- rowers ¹		Size of borrower (Total assets, in thousands of dollars)				
			Under 50	50- 250	250- 750	750- 5,000	5,000 and over	Under 50	50- 250	250- 750	750- 5,000	5,000 and over	
<i>Amount of loans, in millions</i>													
Unsecured.....	\$2,638	\$44	\$31	\$48	\$222	\$2,292	26.1	19.0	2.6	0.8	1.1	2.6	
Secured.....	1,851	310	357	190	299	695	115.8	85.9	21.6	4.5	2.0	1.8	
All term loans ¹	4,488	354	388	238	521	2,987	141.9	105.0	24.2	5.3	3.1	4.3	
Secured:													
Endorsed and co-maker.....	74	12	7	12	23	20	7.2	6.1	0.7	0.2	0.1	(²)	
Inventory.....	57	3	4	12	15	24	1.4	1.0	0.2	0.1	0.1	0.1	
Equipment.....	446	107	73	40	75	150	51.0	42.8	5.4	1.3	0.6	0.8	
Plant and other real estate.....	583	164	220	73	67	55	45.2	29.9	12.7	1.9	0.6	0.1	
Stocks and bonds.....	306	8	11	8	36	243	2.4	1.3	0.6	0.1	0.2	0.2	
Accounts receivable, assignment of claims, life insurance.....	141	8	13	13	25	82	5.0	3.0	1.1	0.3	0.2	0.4	
Oil runs.....	131	1	4	13	41	72	0.6	0.1	0.1	0.2	0.2	(²)	
Government participation or guarantee.....	62	6	25	16	10	5	1.6	0.7	0.6	0.2	0.1	(²)	
Other security.....	49	1	1	2	7	38	1.4	1.1	0.2	0.1	(²)	0.1	

Percentage distribution of all loans										
Unsecured.....	58.8	12.5	8.1	20.1	42.7	76.7	18.4	18.1	10.8	59.2
Secured.....	41.2	87.5	91.9	79.9	57.3	23.3	81.6	81.9	89.2	40.8
All term loans ¹	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Percentage distribution of all secured term loans										
Secured:										
Endorsed and co-maker.....	4.0	3.9	1.9	6.5	7.7	2.9	6.2	7.1	3.1	1.9
Inventory.....	3.1	0.8	1.1	6.3	4.9	3.5	1.2	1.1	0.9	3.5
Equipment.....	24.1	34.6	20.4	21.1	25.2	21.6	44.1	49.8	24.9	47.2
Plant and other real estate.....	31.5	52.8	61.7	38.4	22.5	8.5	39.1	34.7	58.7	6.4
Stocks and bonds.....	16.6	2.7	3.0	4.5	11.9	35.0	2.1	1.6	2.9	10.1
Accounts receivable, assignment of claims, life insurance.....	7.6	2.5	3.6	6.7	8.5	11.9	4.3	3.5	5.0	22.0
Oil runs.....	7.1	0.3	1.1	6.7	13.8	10.4	0.5	0.1	0.5	2.0
Government participation or guarantee.....	3.4	2.0	7.0	8.5	3.3	0.7	1.3	0.8	3.0	1.4
Other security.....	2.7	0.4	0.2	1.3	2.2	5.5	1.2	1.2	0.9	5.5
All secured term loans.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Excludes a small amount of loans not classified by type of security and size of borrower.

* Less than 50.

Note.—Detailed figures may not add to totals because of rounding.

high as that of the large, well-established concern, so that the bank is more insistent on specific security in the case of the former than in the case of the latter.

Regarding the loans that are secured, equipment, plant and other real estate, and stocks and bonds lead the list of collateral security for all borrowers. Among the smaller borrowers, equipment, plant and other real estate bulk large, with stocks and bonds of minor importance. Among the very largest borrowers, on the other hand, stocks and bonds lead the list of collateral, while plant and other real estate is of minor importance. Stocks and bonds of subsidiaries are often available to large borrowers and make satisfactory security. Most small borrowers, on the other hand, have no such securities to offer as collateral.

The requirement of collateral security, while frequent in term loans, is by no means the only—or even the most important—way in which the banker attempts to protect himself against loss on this type of lending. As in the case of short-term commercial loans, reliance is placed largely on a careful investigation of the borrower's business and on his willingness and ability to repay the loan.

The problem of credit analysis in the case of term loans, however, is somewhat different from that of the analysis of short-term credit risks. As well stated by Holthausen, "the average term loan does not mature for several years from the time of making and commercial banks extending this type of credit must place considerable emphasis on the financial and industrial prospects of the borrower. Among the major items to be considered are future earning power, ability to meet scheduled payments, ability to maintain a prudent level of liquidity for operating purposes, continuity of management, existing and future competitive position within the industry, and assurance that assets will not be pledged to the detriment of the term loan creditor."

It will be seen that this type of investigation appears to follow rather closely that of the investment analyst, and this is in fact the case. Many term loans are used for investment purposes and repayment depends on the flow of the borrower's income over a period of years rather than on his ability to retire his debt from the proceeds of the sale of goods over

a period of months. The current or working capital position of the borrower, while taken into account, does not receive the emphasis accorded it in the case of commercial loans. As a matter of fact, the large banks find it convenient to combine the analytical skills of their credit and investment departments in investigating the credit risk attaching to term loans.

A final and important protection to the banker may be obtained through the loan agreement. This agreement, like the bond indenture, is designed to protect the creditor—in the case of term loans, the banker—against possible loss. Thus, the loan agreement may stipulate that the borrower may not issue obligations having a prior lien to that of the banker during the life of the loan. The agreement may also give the banker the position of a preferred creditor in case of failure of the borrower, and may contain various other stipulations designed to offer protection to the lender.

The loan agreement is accordingly an important document to the banker granting term loans, particularly loans not secured by specific collateral. As with bonds, the real security to the lender consists of the earning power, competitive position, and managerial ability of the borrower. If these are satisfactory and the banker's creditor position is protected by the loan agreement, the unsecured term loan may well offer as high a degree of safety as though specific collateral were demanded and obtained. In every case, whether collateral is required or not, the credit investigation of a prospective term borrower should cover the items that we have noted above.

Interest charged.—Interest rates on term loans show a fairly close relation to the size of the loan as indicated in the accompanying table. On the very smallest loans the rate charged tends to be high, but decreases as the size of the loan increases. This is to be expected. A small loan is roughly as expensive to investigate and service as a large one. Moreover, the risk attaching to small loans as a class is almost inevitably greater than that associated with larger loans. Many small-term borrowers are new or young enterprises whereas the larger borrowers are apt to be well-established concerns with a satisfactory historical record of earnings and management.

Rates charged by banks on term loans accordingly varied in 1946 from a high of slightly more than 9 per cent on loans of less than \$500 to an average of only 2 per cent on loans of \$1,000,000 and over. The average rate for all term loans, 2.8 per cent, is very moderate. Since the term loan has become important in bank lending, the country has experienced no major depression. Losses have been comparatively small. If losses should mount heavily in a depressed condition of industry, there is some question whether the rate structure is high enough to compensate for possible risks.

TABLE 23
AVERAGE INTEREST RATES ON TERM LOANS MADE BY MEMBER
BANKS TO BUSINESS, NOVEMBER 1945-NOVEMBER 1946, BY
SIZE OF LOAN¹

Size of loan (In dollars)	Average interest rate (Per cent)
Less than 500	9.1
500-999	7.9
1,000-4,999	6.0
5,000-9,999	5.1
10,000-24,999	4.6
25,000-49,999	4.3
50,000-99,999	3.9
100,000-499,999	3.1
500,000-999,999	2.4
1,000,000 and over	2.0
All term loans	2.8

¹ Includes term loans made from Nov. 1, 1945 through Nov. 20, 1946 and outstanding on the latter date; excludes that portion of term loans made during this period but paid in full or in part before the date of the survey. This table measures the effective annual rate of interest, not the stated rate. Many small loans were consumer credit type loans where the charge was on a discount basis and the stated rate was therefore less than the effective rate.

Critique of term lending.—For reasons to be presented later,¹⁷ orthodox commercial banking theory has opposed the creation of check currency through the purchase of investment securities or the extension of investment loans by the banks. To the extent that term loans furnish funds for

¹⁷ Chapter 26.

investment purposes, this type of lending, except on the basis of time or savings deposits, is not desirable.

In spite of this fact, the development of the term-lending business by the commercial banks is not wholly to be decried. In actual practice, the commercial banks of the United States have created checking deposits through the extension of investment loans secured by stocks and bonds. As compared with extending security loans and purchasing bonds, the practice of term lending is a distinct improvement.

Consider, for example, the situation that prevailed in the latter twenties. Between 1925 and 1929, security loans to customers increased \$3 billion and loans to brokers (including loans for the account of others) increased about \$4 billion. This vast expansion of credit furnished funds to industry on an indirect basis. Loans were made to individuals, directly or through brokers, to buy securities, chiefly stocks. The bull market in stocks permitted the flotation of new issues at favorable prices, purchased by individuals in large part on borrowed funds. The funds thus obtained were used by industry for both working and fixed capital purposes, but the banks had no direct contact with these industries and no control over the use to which the funds were put.

In contrast to this situation, consider the matter of term lending. Here also the borrowing concerns use the funds for both working and fixed capital purposes. But the loans are made directly to the borrowing customer after a thorough investigation by the bank and under the terms of a loan agreement that gives the banker the best protection possible. The banker knows exactly how the funds he has advanced are being used and is in a position to maintain direct contact with the business during the life of the loan. There can be no question from the standpoint of the banker of the superiority of this method of extending credit to industry over that which prevailed in the last few years of the twenties.

Another favorable characteristic of term lending as it has developed is the fact that funds are thereby made available to small concerns that might otherwise find it difficult to obtain essential capital. In discussing the types of term borrower earlier, the wide distribution of term loans among small enterprises was emphasized. This, in the author's judgment,

is the outstanding contribution of term lending by the banks. In earlier years, small new enterprises were often able to raise capital locally among friends who had money to invest and were willing to take a chance on the ultimate success of a new local venture. Now, because of high taxes and what not, such funds are not available. By furnishing funds to small enterprises that have a favorable outlook, the banks are performing a real service to the country.

Our conclusion must be, therefore, that, although the creation of check currency for fixed investment purposes is undesirable, the furnishing of such credit directly to borrowers through term loans is far superior to the indirect method of furnishing funds to industry by lending to individuals on the security of stocks and bonds.

OTHER LOANS

Loans secured by stocks and bonds.—Other loans extended by the commercial banks are of the investment type. Of these, loans secured by stocks and bonds, while constituting but a small proportion of total loans at the close of 1946, have at times in the past assumed a large significance. It has already been noted that some of these loans may represent the extension of credit for consumption purposes while others may be classed as commercial from the point of view of the uses to which the borrowed funds are put. Nevertheless, the great bulk of loans of this type may properly be considered as furnishing capital for investment uses. Presumably, then, they should be based primarily on savings deposits, not on deposits payable on demand.

This is a point that requires further emphasis for the reason that loans on stock and bonds have a deceptive appearance of liquidity. In the first place, loans of this sort are usually granted for a moderate period of time, such as ninety days, and in the second place, the banker is amply protected against loss or failure to pay at maturity by the collateral deposited by the borrower. Figure 14 is a reproduction of the collateral loan agreement used by a large New York bank. It will be noted that the bank has the right to call for additional collateral during the life of the loan, to sell the collateral and terminate the loan immediately if such added

PAYABLE IN FUNDS CURRENT AT THE
NEW YORK CLEARING HOUSE

New York, 19.....
, after date, without grace,
 the undersigned, for value received, jointly and severally promise to pay to
 the GUARANTY TRUST COMPANY OF NEW YORK, or order, at the principal office of said Trust
 Company in the City of New York,
 Dollars,
 with interest at the rate of per cent per annum, payable monthly on the last day of each
 month debiting the amount of such interest to the deposit account of the undersigned, having
 deposited and pledged with the said Trust Company as collateral security for the due payment
 of this note and of any and all other obligations or liabilities of the undersigned to said Trust
 Company, due or to become due, or which may hereafter be contract, ¹ or existing, the following
 property:

The undersigned hereby jointly and severally agree to deposit with the Trust Company such additional collateral security as may from time to time be demanded, and hereby give to the Trust Company a lien upon and hereby pledge all money and property of the undersigned now or at any time hereafter in the possession of the Trust Company, including any balance of any deposit account of the undersigned with the Trust Company, for the due payment of this note and of all said obligations and liabilities.

Upon the non-payment of this note or of any of the aforesaid obligations or liabilities, or upon the non-performance of any of the agreements of this note by the undersigned, then the whole or any part of any or all of the aforesaid obligations or liabilities of the undersigned shall mature at the election of the Trust Company upon demand or by presentation thereof for payment; and in any such event the Trust Company shall have the right to sell, assign and deliver the whole or any part of the property hereinabove specifically described or of any property substituted therefor or of any additions thereto or of any other property of the undersigned then in its possession, at any time or times either at the New York Stock Exchange or at any broker's board or at public or private sale, either for cash or on credit or for future delivery, without demand, advertisement or notice, which are hereby waived, and to apply the net proceeds to the payment of this note and of any or all other such obligations or liabilities of any of the undersigned and of all expenses, accounting for any surplus; the undersigned remaining liable for any deficiency. Upon any sale as aforesaid, the Trust Company may purchase and hold the whole or any part of the property sold, free from any claim or right of redemption of the undersigned, which is hereby waived and released.

In the event of the insolvency or bankruptcy of, or appointment of a receiver for any of the undersigned, this note and all said obligations and liabilities shall forthwith become due and payable without demand or notice.

[SPECIMEN]

FIG. 14. COLLATERAL LOAN AGREEMENT

margin is not forthcoming, or to terminate the loan at maturity through sale of the collateral if the borrower is unable or unwilling to pay the loan when it comes due.

In spite of such precautions, loans on stock and bond security are apt to be indefinitely renewed. As long as the borrower keeps a sufficient margin of salable security against his loan, he feels that the banker should renew it as often as desired, while the banker himself hesitates to demand payment from a borrowing customer at the maturity of the loan if a renewal is requested. The borrower is thus permitted to carry securities for an indeterminate period on the basis of bank credit.

It would be possible for the bank to assist the individual investor to purchase securities, on the basis of loans secured by stocks and bonds, and, at the same time, to inject a considerable measure of liquidity into such loans if periodic reduction in the principal of the loan were insisted upon. In this fashion the banks could finance the distribution of securities to individual investors on loans that would exhibit a much greater degree of real liquidity than many of them now possess.

Loans on real estate.—The other important class of investment loans consists of loans on the security of real estate. Such loans have no proper place in the portfolio of the commercial bank. Since most of the so-called commercial banks accept savings deposits, however, they do extend real estate loans to varying extents. Loans of this type will be considered under the head of savings banking at a later point (Chapter 37), and need only be mentioned here. Suffice it to note that they comprise a highly specialized class of loans that should be handled only by competent experts.

Conclusion.—It should be pointed out that an indeterminate part of loans secured by stocks and bonds and real estate loans are, in fact, business loans of the term variety. Reference to Table 22 shows term loans of \$583 million secured by plant and other real estate. These are presumably reported as real estate loans, while the \$306 million of term loans secured by stocks and bonds are probably included in security loans.

The percentage distribution of all loans of insured com-

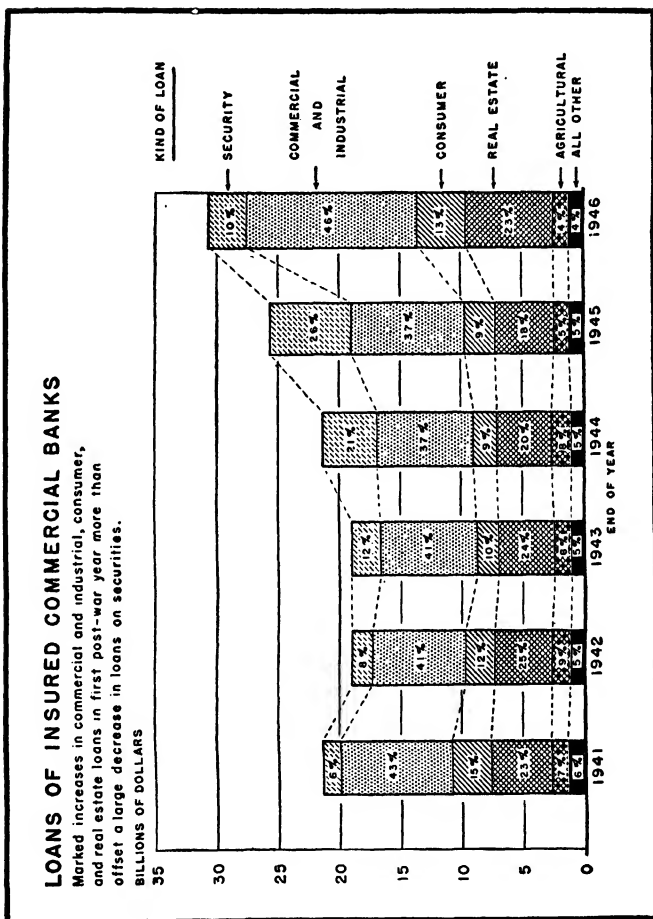


CHART 5

mercial banks at the close of 1946 is shown in the accompanying chart reproduced from Report No. 26, of the Federal Deposit Insurance Corporation.

INVESTMENTS

Investments and commercial banking.—Bank investments for secondary reserve purposes have already been discussed in Chapter 14. Strictly speaking, long-term investments have no proper place in a discussion of commercial banking except for the possible use of capital funds in the purchase of investment securities. On the other hand, time and savings deposits, of which the commercial banks hold large amounts, may properly be invested in long-term securities.

In spite of this fact, investments at present constitute a much larger total of earning assets than do loans and discounts. The explanation of this is the large volume of United States obligations that were purchased by the commercial banks in the course of World War II. At the end of 1946, all insured commercial banks held \$73.6 billion of government obligations as compared with \$7.9 billion of other securities and \$30.7 billion of loans and discounts.

Leaving government securities out of account, we find that the investment-type assets of the commercial banks were well below the limit fixed by time deposits plus capital accounts at the close of 1946. This is indicated by the following data from the December 31, 1946, report of insured commercial banks.

(Billions of dollars)			
Other securities	7.9	Time deposits	32.8
Security loans	3.1	Capital accounts	9.3
Real estate loans	7.0		
Consumer loans	4.0		
Bank premises	1.0		
	<hr/> 23.0		<hr/> 42.1

The excess of time deposits plus capital accounts (over \$19 billion) over the above-listed investment-type assets is much more than ample to cover that portion of term and agricultural loans that are not of the working capital variety. In fact, it would more than cover all term and agricultural loans, a considerable proportion of which are self-liquidating.

From the bankers' point of view, government obligations are quite properly considered highly liquid assets of the secondary reserve variety. The Federal Reserve Banks until recently would buy Treasury bills (under repurchase agreement or outright) at a discount of $\frac{3}{8}$ of 1 per cent, and the Reserve authorities have undertaken to maintain the market price of longer-term government obligations, so that Treasury bonds can be sold in the market without fear of substantial loss. Moreover, about \$13.5 billion of commercial banks holdings of government obligations were in the form of bills and certificates of indebtedness and another \$19.5 billion in notes and bonds maturing within five years.

Commercial bank investment problem simple.—If we consider the selection and purchase of "Other securities" as a part of the business of utilizing time deposits, the investment problem of the commercial department boils down to one of selecting the maturities of government obligations held. Because of the extremely low yield on short-term "governments," the banks have purchased substantial amounts of longer-term obligations. At the end of 1946 they held \$29.7 billion of maturities between five and ten years and another \$9.5 billion of maturities in excess of ten years.

Under existing circumstances, there is practically no risk of loss in so large a holding of longer-term governments. Not only has it been the policy of the Reserve authorities to maintain the price of these obligations, as already noted, but they are available at par as security for advances to member banks at a low rate of discount. In view of the extremely low yields on short-term governments, it is not surprising that the banks have purchased the longer maturities in substantial amounts.

Conclusion.—This chapter has been concerned with the lending and investment operations of the commercial banks of the country, carried on, presumably, with the use of their own funds. At times, however, it becomes desirable or necessary to supplement the loanable funds of the banks. The Federal Reserve Act established the Federal Reserve banks for this purpose. The latter banks make available additional funds by discounting paper for member banks or by the purchase of paper and/or securities in the open market. These

highly important discount and open market operations of the Federal Reserve banks will constitute the subject matter of the following chapter.

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CHAPTER 16

DISCOUNTS AND OPEN MARKET OPERATIONS OF THE FEDERAL RESERVE BANKS

Introduction.—At the close of the preceding chapter, it was noted that the Federal Reserve banks may contribute additional funds to the operations of the member banks by lending to them or by the purchase of securities in the open market. Conversely, the repayment of loans by member banks or the sale of open market securities by the Federal Reserve banks decreases the amount of funds available to member institutions. Thus, through the discount and open market operations of the Reserve banks, Federal Reserve credit is expanded and contracted, and the laws and policies surrounding these operations are hence of interest and importance. The matter of discountable paper will first be considered, after which attention will be directed to the open market operations of the Federal Reserve banks.

DISCOUNTS

Eligible paper.—The term “eligible paper” is applied to any sort of paper that, under the Federal Reserve Act and the regulations and rulings of the Board of Governors, may properly be presented in the ordinary course of business for rediscount or discount at the Federal Reserve banks.

Certain aspects of this definition require further comment. First, as regards the phrase “in the ordinary course of business,” it should be noted that notes of individuals and four-month notes of member banks (to be discussed later) are not included as eligible paper as the term is here used. They are in the nature of emergency discounts, and, while eligible under certain conditions, are not presented in the ordinary course of business. It seems better to confine the term “eligible paper” to the narrower use suggested above.

A second point that, perhaps, needs clarification is the

distinction between the terms "rediscounts" and "discounts" as used in the definition. A rediscount represents a customer's note or bill of exchange that has been discounted at a member bank and rediscounted by the member bank at the Federal Reserve bank. A discount represents a note (usually of a member bank) that has been discounted directly by the Federal Reserve bank.

As a matter of fact, the terms "rediscounts" and "discounts," although technically correct, are not used in practice. Instead, the terms *discounts* and *advances* are used, the first to represent rediscounted paper and the second to represent paper discounted in the first instance by a Federal Reserve bank. Bearing this in mind, we shall first consider the provisions of the law and the regulations of the Board of Governors regarding discounts.

Discounts.—The Federal Reserve Act provides that Federal Reserve banks may discount for member banks "notes, drafts and bills of exchange arising out of actual commercial transactions; that is, notes, drafts and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Board of Governors of the Federal Reserve System to have the right to determine or define the character of the paper thus eligible for discount within the meaning of this Act." Paper of factors making advances exclusively to producers of staple agricultural products in their raw state and paper secured by staple agricultural products or other goods, wares, or merchandise is specifically recognized as eligible. Paper discounted under the provisions of this paragraph (Sec. 13, par. 2) must have a maturity at the time of discount not exceeding ninety days. Paper covering merely investments or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the United States, is specifically made ineligible under this paragraph.

Federal Reserve banks "may discount or purchase bills of exchange payable at sight or on demand which grow out of the domestic shipment or the exportation of nonperishable, readily marketable agricultural and other staples and are secured by bills of lading or other shipping documents con-

veying or securing title to such staples: *Provided*, That all such bills of exchange shall be forwarded promptly for collection, and demand for payment shall be made with reasonable promptness after the arrival of such staples at their destination: *Provided further*, That no such bill shall in any event be held by or for the account of a Federal reserve bank for a period in excess of ninety days. In discounting such bills Federal reserve banks may compute the interest to be deducted on the basis of the estimated life of each bill and adjust the discount after payment of such bills to conform to the actual life thereof." (Sec. 13, par. 4)

"Any Federal reserve bank may discount acceptances of the kinds hereinafter described, which have a maturity at the time of discount of not more than 90 days' sight, exclusive of days of grace, and which are indorsed by at least one member bank: *Provided*, That such acceptances if drawn for an agricultural purpose and secured at the time of acceptance by warehouse receipts or other such documents conveying or securing title covering readily marketable staples may be discounted with a maturity at the time of discount of not more than six months' sight exclusive of days of grace." (Sec. 13, par. 6)

Section 13a of the Federal Reserve Act has special reference to agricultural paper. It provides (par. 1) that "any Federal Reserve bank may, subject to regulations and limitations to be prescribed by the Board of Governors of the Federal Reserve System, discount notes, drafts, and bills of exchange issued or drawn for an agricultural purpose, or based upon live stock, and having a maturity, at the time of discount, exclusive of days of grace, not exceeding nine months, and such notes, drafts, and bills of exchange may be offered as collateral security for the issuance of Federal reserve notes under the provisions of section 16 of this Act: *Provided*, That notes, drafts, and bills of exchange with maturities in excess of six months shall not be eligible as a basis for the issuance of Federal reserve notes unless secured by warehouse receipts or other such negotiable documents conveying or securing title to readily marketable staple agricultural products or by chattel mortgage upon live stock which is being fattened for market."

This section also provides (par. 2) that Federal Reserve banks may rediscount for, and discount notes payable to, Federal Intermediate Credit Banks when the paper has a maturity of not more than nine months, while paragraph 4 classifies paper of agricultural cooperative marketing associations as eligible agricultural paper.

The amount of paper bearing the name of one maker or drawer that may be discounted for member banks by the Federal Reserve banks is limited to the amount that national banks may discount for customers under the provisions of the National Bank Act.

Regulation A of the Board of Governors.—In exercising its statutory power to define the character of paper eligible for discount at a Federal Reserve bank, the Board of Governors has issued a regulation dealing with discounts and advances. The general character of notes, drafts, and bills of exchange eligible for discount is set forth in Regulation A, Section I, Series of 1937. In this section of Regulation A, the Board has stated that a note, draft, or bill of exchange, in order to be eligible, must meet the following requirements:

(1) It must be a negotiable note, draft, or bill of exchange, bearing the endorsement of a member bank, which has been issued or drawn, or the proceeds of which have been used or are to be used, in producing, purchasing, carrying or marketing goods in one or more of the steps of the process of production, manufacture, or distribution, or in meeting current operating expenses of a commercial, agricultural, or industrial business, or for the purpose of carrying or trading in direct obligations of the United States (i.e., bonds, notes, Treasury bills or certificates of indebtedness of the United States);

(2) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for permanent or fixed investments of any kind, such as land, buildings, or machinery, or for any other fixed capital purpose;

(3) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for transactions of a purely speculative character or issued or drawn for the purpose of carrying or trading in stocks, bonds or other investment securities except direct obligations of the United States (i.e., bonds, notes, Treasury bills or certificates of indebtedness of the United States);

(4) It must have a maturity at the time of discount of not exceeding ninety days, exclusive of days of grace, except that agricultural paper as defined below in this section of this regulation may have a maturity of

not exceeding nine months, exclusive of days of grace; but this requirement is not applicable with respect to bills of exchange payable at sight or on demand of the kind described in subsection (b) of this section.

In addition to the above, Section I of this regulation provides for the discount by the Reserve banks of (1) sight bills of exchange drawn against the shipment or exportation of nonperishable, readily marketable staples, (2) construction loans of not more than six months' maturity (ninety days from date of discount), and (3) paper of cooperative marketing associations and factors. The regulation also provides that paper secured by ineligible assets is eligible for discount if the proceeds have been or are to be used for an eligible purpose.

It is clear from the foregoing requirements that the Federal Reserve Board has so interpreted the law as to make eligible paper practically synonymous with self-liquidating paper, with the exception, of course, of paper secured by bonds and notes of the United States. Although not definitely stated in so many words, the inference is unmistakable that the proceeds from the sale of goods is expected to furnish the wherewithal to repay the loan.

Trend of rulings.—In its rulings on specific cases that have been brought up under Regulation A, the Board has been rather consistent in requiring that paper be of the self-liquidating type in order to be eligible as far as commercial paper is concerned, but has not always insisted on the same characteristic as regards agricultural paper. Thus, for example, paper arising out of the purchase of a tractor by a farmer for his own use is deemed eligible, even though the tractor is a capital investment that will last several years. On the other hand, notes of a corporation engaged in the business of furnishing motor transportation, made for the purpose of providing funds with which to purchase motor trucks, have been declared ineligible, even though the trucks would last no longer than the farmer's tractor.

The defense of these two apparently conflicting rulings by the Board seemed to be that the tractor was a very small part of the farmer's investment, while motor trucks constituted a very large part of the investment of the motor transportation company. To make distinctions of degree of this

sort, however, frequently leads to difficulties, and it would have been better had the Board treated both of these types of paper as ineligible, using the self-liquidating nature of notes, drafts, or bills of exchange as a criterion of eligibility, whether the paper happens to be commercial, industrial, or agricultural in origin.

The Board has quite properly ruled that the security, if any, attached to a note, draft, or bill does not affect its eligibility, provided that the funds obtained by the borrower have been or are to be used for an eligible purpose. Accordingly, a note might be secured by stocks and bonds or by a mortgage on real estate and still be eligible, if the borrower had used the funds for producing or marketing goods. The Board has also ruled that an unsecured promissory note accompanied by a financial statement of the borrower is presumed to be eligible if there is a satisfactory excess of quick assets over current liabilities, even if the proceeds should be used for an investment purpose. This, again, is a reasonable attitude, for if the borrower has sufficient quick assets to pay current liabilities, including his note to the bank, within the maturity of the note, the note must be considered as self-liquidating under any reasonable interpretation.

Since there is a difference of six months in the allowable maturity of commercial and agricultural paper that is eligible for discount, the Board of Governors has naturally been confronted with cases in which it had to decide whether particular notes, drafts, or bills should be classified as agricultural or commercial. A question of this sort might arise, for example, in connection with a transaction involving agricultural products, such as a note given to a farmer in payment for grain purchased for resale, or the bill of a packing company, the proceeds of which are used for the purchase of livestock which is slaughtered for sale directly thereafter. In both of these instances, as well as others of a similar nature, the Board ruled that the paper was commercial, not agricultural, since the sale of goods, even though they be agricultural products, constitutes a commercial transaction. On the other hand, where the proceeds of the loan are used by the farmer in growing grain, or carrying it pending its orderly marketing, or for fattening cattle, draining land inci-

dental to its cultivation, etc., the paper is to be considered as agricultural and hence entitled to a maturity at the time of rediscount of nine months.

Any exhaustive discussion of the Board's rulings on eligible paper would require far more space than is here available. These rulings cover a multitude of technical questions such as calculation of discount, liabilities of parties to a note or bill, the need for documents in the case of acceptances, and many other items. Consequently, only a few significant cases have been touched on with a view to presenting the trend of the Board's decisions on the nature of paper held eligible for discount under the terms of the Federal Reserve Act and of the Board's regulations.

Advances.—The original Federal Reserve Act made no provision for advances to member banks. The amendment of September 7, 1916, permitted Federal Reserve banks to make advances for periods not exceeding fifteen days to their member banks on the latter's promissory notes secured by bonds and notes of the United States. As a result of various amendments, the security that may now be used for such notes has been broadened to include Treasury bills, certificates of indebtedness, debentures of the Federal Intermediate Credit Banks, Federal Farm Mortgage Corporation bonds, and Home Owners' Loan Corporation bonds.

The Banking Act of 1933 permitted the Reserve banks to make advances to member banks on their promissory notes secured by eligible paper with a maturity up to ninety days, and the Banking Act of 1935 authorized advances to member banks, secured by any sound assets acceptable to the Reserve banks, with maturities up to four months, but such advances were to bear interest at a rate not less than $\frac{1}{2}$ of 1 per cent per annum higher than the highest discount rate in effect on the date of such note. (Sec. 10b)

The Act, as amended, also permits advances to groups of five or more member banks, when eligible paper is lacking, at a penalty rate of not less than 1 per cent above the discount rate in effect on the date of such advance. This provision, which resulted from an amendment of February 27, 1932 (Glass-Steagall Act), is much more onerous than the emergency advance provision of the Banking Act of 1935, referred

to in the previous paragraph, but it is still included in the Act, although it probably will never be resorted to.

In addition to the above-mentioned advances to member banks, the Federal Reserve Act, as amended, makes certain limited provisions for advances to individuals or business units. In unusual and exigent circumstances, the Board of Governors, upon an affirmative vote of five members may authorize Federal Reserve banks to discount for individuals, partnerships, or corporations, notes, drafts, or bills of exchange of the kind and maturity made eligible for discount by member banks when such paper is indorsed or secured to the satisfaction of the Reserve bank and when evidence is given by the borrower of his inability to obtain accommodation from other banking institutions.

The Act also authorizes any Federal Reserve bank, under rules and regulations of the Board of Governors, to make advances to any individual, partnership, or corporation on the promissory notes of the latter secured by direct obligations of the United States. Such advances may be made for periods not exceeding ninety days and at rates fixed from time to time by the Reserve banks, subject to the review and determination of the Board of Governors.

The Loan to Industries Act of June 19, 1934, permitted the Federal Reserve banks, under authorization from the Board of Governors, to make loans to established industrial or commercial businesses for working capital purposes with maturities up to five years, if it appears that such business concerns are unable to obtain requisite financial assistance on a reasonable basis from the usual sources. The Reserve banks may also make commitments to take over loans of this type from member banks, provided that the latter shall obligate themselves for any losses suffered up to 20 per cent. The total amount of loans, advances, and commitments of the Federal Reserve banks in this connection is limited to their paid-up surplus as of July 1, 1934, plus certain amounts paid to the Reserve banks by the Treasury (totaling \$139,299,557).

The provisions pertaining to working capital loans and commitments are contained in Sec. 13b of the Federal Reserve Act. The amount of such business done by the Reserve banks has been comparatively small and, in its Annual Report for

1946, the Board of Governors recommends that Sec. 13b be repealed, that the \$139 million referred to above be returned to the Treasury, and that Sec. 13 of the Act be amended to permit the Reserve banks to guarantee business loans for member banks up to 90 per cent.

The author is sympathetic to the repeal of Sec. 13b, but is not favorably inclined toward the Board's proposal for the guarantee of business loans up to 90 per cent. Taking the risk of loss is part of the business of the member banks, and the ability to transfer a substantial portion of this risk to the Reserve banks would be detrimental to the maintenance of sound lending standards.

Regulations of the Board.—The regulations of the Board of Governors concerning advances require little comment. For the most part they merely amplify slightly the provisions of the Act. In Sec. 2d of Regulation A, the Board lists eight types of security suitable for use as security for four-month advances under Sec. 10b of the Act. Also, in view of the fact that the Act permits ninety-day advances to individuals, partnerships, and corporations secured by direct obligations of the United States, the Board's regulations permit the use of such obligations as security for ninety-day advances to member banks (and to nonmember banks although at a higher rate), since such banks are corporations and hence come under that provision of the Act.

Regulation S, governing advances, loans, purchases, and commitments under the Loans to Industries Act of 1934, is largely technical and definitive and need not concern us in the present connection.

Eligible vs. acceptable paper.—Although the Board of Governors determines the type of paper that, under the law, is eligible for discount or rediscount by the Federal Reserve banks, it is the function of the latter institutions to decide whether or not a given note, draft, or bill of exchange is acceptable. For example, a given note would fall within the classification of commercial paper eligible for rediscount if the borrower had used the funds obtained for a commercial purpose. Yet an examination of the borrower's financial statement by the credit department of the Federal Reserve bank might indicate that the note was not satisfactory as a credit

risk. In such a case, it would not be acceptable to the Federal Reserve bank and would not be discounted, even though it fell in the general class of eligible paper.

It is not necessarily true, therefore, that because a member bank has eligible paper it will be able to rediscount all of that paper at its Reserve bank should it desire to do so. Each Federal Reserve bank has the right to examine paper presented to it by a member bank for discount, and to refuse to discount any paper that it deems to be unsound or unsatisfactory. Ineligible paper is naturally not acceptable for discount, however sound it may be, but eligible paper may or may not be acceptable, depending upon whether or not the Reserve bank finds it satisfactory.

Eligible paper and eligible assets.—The ability of a member bank to obtain accommodation at its Reserve bank is not limited by its holdings of eligible paper in the narrower sense in which the latter term is used in this chapter. Government securities are not eligible paper in themselves, but since they can be used by member banks as collateral for fifteen-day and ninety-day advances at the Reserve banks, they furnish the member banks with the means of obtaining funds from the Reserve banks and hence may be termed eligible assets. As a matter of fact, since the Banking Act of 1935 authorized four-month advances secured to the satisfaction of the lending Reserve bank, all sound assets are now eligible assets, provided a member bank is willing to pay the $\frac{1}{2}$ per cent premium on advances of this nature.

Limitations on discounting for member banks.—Except for the limitation on five-year working capital loans, purchases or commitments to financial institutions and industries under the Act of June 19, 1934, there is no specific legal limit to the amount of paper that the Federal Reserve banks may discount for member institutions. The amount of notes, drafts, and bills bearing the signature or indorsement of any one borrower is limited to 10 per cent of the borrowing member bank's capital and surplus, and the Board of Governors *may* limit the amount of long-term agricultural paper which *may* be discounted by any Federal Reserve bank to a proportion of that bank's assets, but this limitation is not compulsory. The presumption is that the Reserve banks will

govern their total discounts for member banks by varying their rates of discount rather than by fixing any specific limits for various member banks.

Nevertheless, the Federal Reserve banks have indirectly limited the amount of their discounts for specific member banks by adopting a policy that is opposed to continuous borrowing by member banks or to borrowing in excessive amounts. What constitutes continuous or excessive borrowing depends upon particular circumstances. To quote former Governor Harrison of the Federal Reserve Bank of New York:

There are various yardsticks; it is just a matter of management. We are always considering and determining whether a member bank is out of line or borrowing excessively in proportion to the needs of the community. Another yardstick is the amount of the member bank's reserve with us, and still another is its capital and surplus, but I do not know any one of them that I would say is a controlling yardstick. It depends on the whole situation.

For instance, you have a community of 10 banks and because of a drought or plague or peculiarly poor business, because of the kind of business they are dealing with, those banks, all of them, need a great deal of Federal Reserve accommodation. All their borrowings go up proportionately for the same reason, which is a community reason. We would be less severe or reluctant to lend a borrower of that kind because he is not himself abusing the privileges for his own profit; in other words, he is using our privileges because the needs of the community are such that the whole banking group needs our help. But if in that same community of 10 banks some one bank gets over-ambitious and develops an investment policy of buying first-rate or second-rate bonds or even call loans, that requires its borrowing from the Reserve bank, we will usually have them come to our office and talk over the whole situation with them intending to restrain the bank, not on the ground that we do not like the particular bonds they had bought or do not like the particular customer they are dealing with, not on the ground that we do not like their making a loan on collateral but rather that their investment policy is an exaggerated one, designed solely to make a profit because of the differential between our rate and the rate on their investments.¹

On the other hand, it has always been the policy of the Reserve banks not to interfere with the business conduct of member banks unless the latter were borrowing from the Reserve banks. Even in that eventuality, the Reserve banks have refrained from attempting to dictate the manner in

¹ *Hearings, S. Res. 71, p. 67.*

which the borrowing members should manage their business, except to give advice and to try to insure that the paper that had been discounted represented sound credit extension.

For a time, also, the Federal Reserve banks attempted to limit borrowing by specific institutions by the device of employing graduated discount rates. The Act of April 13, 1920, provided that the Reserve banks might fix discount rates for various classes of paper that, "subject to the approval, review and determination of the Federal Reserve Board, may be graduated or progressed on the basis of the amount of the advances and discount accommodations extended by the Federal Reserve bank to the borrowing bank." Resort to this method of discriminating among borrowing banks, however sound it may have been, did not prove popular, and the amendment in question was repealed by the Agricultural Credits Act of 1923. Since then the Reserve banks have used moral suasion, as evidenced by Governor Harrison's testimony, in determining the distribution of discounts among member banks.

As to the limitation of the total amount of discounts for all member banks, that is a question of credit policy to be discussed in a later connection.

OPEN MARKET OPERATIONS

Powers of the Federal Reserve banks.—In addition to their power to discount paper for member banks, the Federal Reserve banks are given the right to buy and sell certain paper and securities in the open market. The Act also states that the Reserve banks shall have the power "to deal in gold coin or bullion at home or abroad, to make loans thereon, exchange Federal Reserve notes for gold, gold coin or gold certificates, and to contract for loans of gold coin or bullion, giving therefor, when necessary, acceptable security, including the hypothecation of United States bonds or other securities which Federal Reserve banks are authorized to hold" (Sec. 14, par. 2(a)). Although this latter provision, which was part of the original Federal Reserve Act, has not been amended, it is apparent that any action of the Reserve banks concerning dealings in gold coin or bullion would, at present, have to

be under the direction of the Treasury, under the terms of the Gold Reserve Act of 1934.

The paper that may be purchased and sold by the Reserve banks consists of bankers' acceptances and bills of exchange of the type made eligible for discount. Open market commercial paper, although eligible for rediscount at the Reserve banks by member banks when within ninety days of maturity, is excluded from the classes of paper that the Reserve banks may buy and sell on the open market. The reason for the exclusion of such paper was doubtless the desire of the originators of the Federal Reserve Act to foster the use of trade acceptances as a substitute for the single-name promissory note in trade financing in this country, not because of any inherent undesirability of open market commercial paper. The Agricultural Credits Act of 1923 also provided that the Reserve banks might deal on the open market in acceptances of Federal intermediate credit banks and of national agricultural credit corporations, whenever the Federal Reserve Board should declare that the public interest so required.

In addition to dealings in self-liquidating acceptances already noted, the original Federal Reserve Act permitted the Reserve banks to buy and sell "bonds and notes of the United States, and bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not exceeding six months, issued in anticipation of taxes or in anticipation of the receipt of assured revenues by any state, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage and reclamation districts." Treasury bills and certificates of indebtedness may be interpreted to constitute notes of the United States. At least, they have regularly been dealt in by the Reserve banks since first issued, and such an interpretation certainly carries out the intent of the law in this respect. Under the acts of January 31, 1934, and April 27, 1934, Federal Farm Mortgage Corporation bonds and bonds of the Home Owners' Loan Corporation, respectively, were made eligible for purchase and sale by the Federal Reserve banks when the maturity of such obligations does not exceed six months. The Federal Farm Loan Act also provides that Federal land bank bonds, when

within six months of maturity, may be bought and sold in the open market by the Reserve banks.

Although the Federal Reserve banks are thus authorized to buy and sell in the open market a fairly wide list of securities, the actual purchase and sale of securities other than direct obligations of the United States has, in the past, been decidedly limited. So also have dealings in trade acceptances. From the standpoint of practice, then, it is not incorrect to consider the open market operation of the Reserve banks as consisting of sales and purchases of (a) bankers' acceptances and (b) obligations of the United States government.

Distinction between operations in acceptances and securities.—The open market operations of the Federal Reserve banks in bankers' acceptances and in United States securities have had two distinct purposes. The efforts, largely successful, of the Reserve banks to build up an active acceptance market in the United States, by fixing artificially low buying rates for bankers' acceptances and standing always ready to buy eligible bills in any amount at these rates, have been described in Chapter 14 and need not be recounted here. By adopting this policy in regard to acceptances, the Reserve banks committed themselves to the purchase of substantial amounts of acceptances even at times when it might have been desirable, from the standpoint of credit control, to divest themselves of some part of their holdings of this type of paper.

In respect to open market dealings in government securities, on the other hand, the Federal Reserve banks have until recently been subject to no such self-imposed limitations. These securities were bought and sold at will and were hence an important tool for use in the control of credit.

Effects of open market purchases and sales.—The subject of credit control is not only vastly significant, but is exceedingly complex as well. It is consequently both necessary and desirable to postpone any discussion of the possibilities, merits, and defects of the control of credit to a later point, after some of the difficult analysis of the factors determining the value of money has been presented. It is possible in the present connection, however, to trace the actual effects of open market sales and purchases on the money market and

to determine what is accomplished by such transactions, without going into the question of whether or not these results are sufficient to attain the ends of the central banking authorities. The following discussion will be confined to dealings in government securities, although the effects on the money market are the same whether transactions are in securities or acceptances.

It is commonly stated that purchases of securities by the Federal Reserve banks pump funds into the money market, while sales draw them out. The manner in which this is accomplished may be illustrated with a hypothetical example, as follows. Suppose that the Federal Reserve Bank of New York buys Treasury notes in the amount of \$1,000,000 from a local dealer in government securities. The dealer receives payment for same in the form of a cashier's or officer's check on the Federal Reserve Bank. He deposits this check in his own bank, say the Chase National. The Chase sends the check to the Federal Reserve Bank for payment and the Reserve bank credits the reserve account of the Chase with the amount of the check.

In this transaction, both the deposits and the reserve of the Chase National Bank have been increased by \$1,000,000. The required legal reserve against this deposit amounts, say, to 20 per cent, or \$200,000, leaving the Chase with \$800,000 of excess reserves, which may be loaned or invested in the money market.² As explained in Chapter 17, this excess reserve forms the basis of a severalfold expansion of loans and deposits in the banking system.

The sale of securities by the Reserve banks has just the opposite effect. If the Federal Reserve Bank of New York sells \$1,000,000 in Treasury notes to this same dealer, he pays for them with a check on his bank, the Chase National. The check is paid by debiting, i.e., reducing, the reserve account of the Chase with the Reserve bank, and the Chase, barring the possession by it of excess reserves, finds it necessary to contract its loans or investments or to borrow from the Reserve bank, in order to maintain its required legal reserve.

² The term "money market" is used in this connection in the broad sense to include the customers' loan market as well as the open markets.

It should be clear from these illustrations that the Federal Reserve banks have the power, through their open market operations, of adding to or subtracting from the reserves of member banks, and that these reserves are the basis of the supply of loanable funds. This, then, is the explanation of the statement that the Reserve banks pump funds into or out of the market by their purchases or sales of government securities.

Control of open market operation.—During the early years of the Federal Reserve system, the Federal Reserve Board, which had supervisory control over open market operations, allowed each Reserve bank to use its own judgment in regard to its purchases and sales in the open market. The Board did, it is true, rule on the eligibility of various types of acceptances for purchase under the terms of the Federal Reserve Act, but, in regard to government securities, each bank used its own discretion in making purchases or sales in the open market.

Under this independent mode of operation by the Reserve banks, there was always the possibility that individual Reserve bank operations might conflict with each other. It is clear that the incidence of the great bulk of open market operations is in New York, the financial center of the country. For example, the sale of a large block of securities by one of the midwestern Reserve banks would very likely be evidenced by debits to the reserve accounts of member banks in New York city for the most part, since the securities would probably be sold in the New York market, or, if not actually sold there, might be paid for with drafts on New York banks. A transaction of this sort might accordingly offset, initially at least, the efforts of the Federal Reserve Bank of New York to pump funds into the market by the purchase of securities.

After the depression of 1921, when the Reserve banks began to deal extensively in government securities, this possibility of conflict became manifest. The result was the organization of an open market investment committee of five Reserve bank governors to coordinate the open market sales and purchases of all of the Reserve banks. This committee was later supplanted by the open market policy conference, which, in turn, without change of personnel or function, was

legalized under the title of the Federal Open Market Committee by the Banking Act of 1933.

Thus, prior to 1936, open market operations, although unified, continued under the direct jurisdiction of the Federal Reserve banks, with the sanction of the Federal Reserve Board. The Federal Open Market Committee, composed of the governors of the twelve Reserve banks, outlined the open market policy to be followed, while an executive committee of five members carried out the actual transactions. The various Reserve banks could participate in purchases at their discretion, but there was no compulsion to do so on the part of any particular bank. Since the Open Market Committee was made up of Reserve bank governors, it was usually possible for it to know, at the time a given line of action was decided upon, what the participations of the different banks would be.

Following the passage of the Banking Act of 1935, the Federal Open Market Committee was changed to include the entire Board of Governors of the Federal Reserve System plus five Reserve bank representatives. Moreover, the newly constituted committee was given power to enforce its decisions on the various Reserve banks. Consequently, the decision on open market operations now rests largely with the Board of Governors, the Reserve banks having no voice in the matter other than their minority representation on the Federal Open Market Committee.

FEDERAL RESERVE RATE POLICY

Provisions of the Act.—Section 14 (d) of the Federal Reserve Act provides that every Federal Reserve bank shall have the power “to establish from time to time, subject to review and determination of the Board of Governors of the Federal Reserve System, rates of discount to be charged by the Federal Reserve bank for each class of paper, which shall be fixed with a view of accommodating commerce and business.” The statement is not entirely clear, as the words “review” and “determination” are seemingly somewhat inconsistent. The word “review” appears to indicate that the Board of Governors has the right to approve, but not fix, the rate of discount established by a Federal Reserve bank. “De-

termination," on the other hand, suggests the right of the Board to specify the rate to be fixed.

A reasonable interpretation of the phrase in question would appear to be that the Board may review a rate fixed by a Reserve bank and, if it finds that rate to be unsatisfactory, may determine the rate to be substituted for it. Actually, the Board has gone even farther than this. In 1927, it ordered the Federal Reserve Bank of Chicago to lower an existing discount rate in direct opposition to the judgment of the Chicago bank's board of directors.

Since 1927, consequently, the Board of Governors has been the body that decides the discount rate policy for the various Reserve banks. It is now customary, if a Federal Reserve bank wishes to make any important change in its discount rate, to obtain in advance the approval of the Board for such a change.

American and English rate policy.—One of the points made by all writers describing the discount rate policy of the Bank of England has been that the Bank of England, in ordinary times, maintains a discount rate that is above the market. The discount rate thus becomes a penalty rate, accommodation being obtainable from the Bank of England only at a rate substantially above the open market rate. This being the case, there is little resort to discounting at the Bank except in times of crisis or emergency.

Some American critics have maintained that the Federal Reserve system should follow a similar practice. The discount rate of the Federal Reserve Bank of New York has usually been above the rate on bankers' acceptances, but below the rate on open market commercial paper and still farther below the rate charged on prime loans to customers. The critics in question, citing the Bank of England practice, aver that Reserve bank rates should be kept above the rates charged by member banks on prime commercial loans to customers.

Certain defenders of Federal Reserve rate policy have answered this criticism by pointing out that the Bank of England merely keeps its rate above the market rate on acceptances and that the Reserve bank rates in this country have likewise been kept above the rate prevailing in the acceptance market. This, of course, is no answer to the objection since

the Reserve banks have most of the time established buying rates on acceptances below their discount rates and have thereby fixed the market rate.

As a matter of fact, in England the commercial banks do not discount paper with the Bank of England. When they need additional funds, they call their loans from the bill brokers and the latter, in order to pay off these loans, are compelled to discount their bills at the Bank of England. There is, therefore, little point in trying to draw comparisons where the conditions are so dissimilar. The real point that the critics have to make is that the Reserve bank rates have not been penalty rates since they have been below the rates charged by member banks on rediscountable paper.

Do the Reserve banks have control?—The question, then, really boils down to this: Do the Reserve banks have control of the market, or are they simply convenient credit reservoirs, furnishing funds to member banks in practically any amount?

Although it is true that the Federal Reserve banks have not been merely emergency institutions, but have, rather, discounted paper for member banks at practically all times, it remains a fact that the Reserve banks are in a position to have substantial control of the market. W. W. Riefler has demonstrated that there is a very close correlation between the *amount* of discounts at the Federal Reserve banks and the weighted average of three short-term open market rates during the period 1917–1928.³ It is also clear from the statistics presented by Riefler that, while there is a fairly close correlation between discount rates at the Reserve banks and open market rates, there is a distinct lag in the movement of discount rates behind the open market rates.⁴ The conclusion is therefore obvious that the Reserve banks have raised or lowered their rates after corresponding changes had already occurred in the rates prevailing in the open markets.

The explanation of this situation lies in the policy of the Federal Reserve banks of frowning upon continuous indebtedness on the part of member banks. Member institutions, finding themselves indebted at the Reserve banks, withdraw

³ W. W. Riefler, *Money Rates and Money Markets in the United States*, pp. 25 ff

⁴ *Ibid.*, Chart V, p. 24.

funds first from the open markets in order to reduce this indebtedness. The decrease in the supply of open market funds naturally causes rates in these markets to rise.

It has also been shown that rates charged customers by member banks follow rate changes in the open markets.⁵ It accordingly follows that the Federal Reserve banks maintain a central control over this group of rates as well as over those prevailing in the open markets. An increase in discounts at the Reserve banks will result in an approximately simultaneous increase in open market rates, followed within a few months, by corresponding, although not usually equally extensive, changes in customers' rates at the member banks.

Relation between discounts and open market operations.—Open market operations in government securities were first extensively engaged in by the Federal Reserve banks in 1922. As a result of the depression of the preceding year, member banks had paid off a substantial portion of their indebtedness at the Reserve banks, and the latter institutions, desiring to increase their earning assets, bought substantial amounts of government securities in the open market. As holdings of government securities mounted, however, discounts decreased still farther.

The Federal Reserve banks accordingly discovered that they could not substantially increase their earning assets by open market purchases, so long as member banks were indebted in any marked degree to the Reserve banks. The explanation of this is simple. It has been explained that member banks do not like to remain in debt to the Reserve banks when it is at all possible to reduce their indebtedness. It has also been shown how the purchase of open market securities by the Reserve banks pumps funds into the market by adding to the reserves of member banks. Consequently, if the Reserve banks buy government securities at a time when the member banks are in debt to them, the member banks will use the funds obtained as a result of these purchases to reduce their indebtedness at the Reserve banks.

Open market operations as an instrument of control.—While the Federal Reserve banks are not able to increase their earning assets substantially by open market purchases as long

⁵ *Ibid.*, Chart III, p. 14.

as member banks are indebted to them, they are able to exert a large element of control over market rates by means of their open market operations. When member banks are heavily indebted to the Reserve banks, they withdraw funds from the open markets to reduce their debt, and money rates tend to stiffen sharply. Thus the Reserve banks, by the sale of government securities, can force member banks to borrow from them and can thereby tighten the money market. On the other hand, the purchase of securities by the Reserve banks enables member banks to reduce their debt and results, consequently, in an easing of money rates.

Open market operations in government securities, if carried to extremes, may become dangerous. For example, between the end of 1929 and the spring of 1935, the Reserve banks built up their holdings of government securities from a nominal figure to the enormous sum of \$2,400,000,000. At the latter date, member banks were not only out of debt at the Reserve banks, but had excess reserves in the amount of more than \$2,000,000,000. Should the member banks have started to expand their loans, investments, and deposits to the limits permitted by these excess reserves, an unsound credit situation, requiring control by the Federal Reserve banks, would doubtless have developed. The Reserve banks, although in a position to withdraw these excess reserves from the market by the sale of \$2,000,000,000 of government securities, could not engage in such drastic selling operations without breaking the market for governments at a time when this would be most undesirable from the standpoint of the Treasury.

The situation in this respect is even more acute at present as a result of World War II. The Federal Reserve banks hold over \$21 billion in government securities, but the sale of any substantial proportion of these would have an undesirable effect on the market for government obligations and would not be seriously considered by the Federal Open Market Committee, which, as previously noted, has for some years followed a policy of stabilizing the market for United States securities.

It is accordingly clear that open market operations in government securities, if too extensive in nature, tie up the poli-

cies of the Reserve banks with the exigencies of government finance in an undesirable fashion. It would seem, then, that the Federal Reserve banks would do better to confine their operations in the government security market within moderate limits.

Conclusion.—This chapter has been concerned with the manner in which the Federal Reserve system has added to the elasticity of the old national banking system by furnishing a reservoir of credit that could be made available to the member banks in time of need. This credit may be expanded in two ways: first, by borrowing on the part of member banks, and, second, by open market purchases by the Reserve banks. These methods are quite different in effect, however, since borrowing is done at the initiative of the member banks and, by putting them in debt to the Reserve banks, exerts a tightening effect on the market, while open market purchases, undertaken at the initiative of the Reserve banks, permit member banks to repay indebtedness, and hence have an easing effect.

Those responsible for the original Federal Reserve Act had in mind a central banking structure that would remedy the inelasticity of the old system by permitting member banks to borrow at the Reserve banks on commercial and agricultural paper. They did not contemplate artificial control of the money market through open market operations in government securities, since the floating supply of such securities was very small. This was changed by World War I, however, and, since 1922, purchases and sales of government obligations by the Reserve banks have been on an extensive scale. The desirability of this change from the standpoint of credit control will be considered in a later chapter.

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(Also see References following Chapters 9 and 10)

CHAPTER 17

THE INTERRELATION OF DEPOSITS, RESERVES, AND LOANS

Introduction.—The interrelation of deposits, reserves, and loans presents a dual problem that may, consequently, be approached in two ways: from the banking and from the monetary approach. The monetary theorist, who is naturally interested in the check currency as an important type of medium of exchange, looks at commercial banking as a mechanism engaged in the creation of this form of exchange medium. The individual commercial banker, on the other hand, does not consider himself in the light of a manufacturer of currency in any sense, but rather as a lender of funds deposited with him by his customers.

At first glance, it would appear that these points of view are diametrically opposed to each other, and that, accordingly, one or the other of them must be wrong. In the present chapter we shall attempt to resolve this paradox; to demonstrate, in fact, that the conflict of views is only seeming. In short, the analysis will show that the banking approach is correct as far as the individual commercial bank is concerned, but that, for the system of banks, the monetary approach is equally well suited.

THE INDIVIDUAL BANK

The old theory.—The earlier theory concerning the interrelation of deposits, reserves, and loans was quite different from that implied in previous chapters of this book. Instead of conceiving loans to be based on deposits, it asserted that a large part of a bank's deposits were created as a result of the loans made by the bank. To illustrate, consider a bank deeming it necessary to maintain a reserve against deposits of 10 per cent, and assume the relation between deposits, reserves, and loans to be as follows:

Loans and discounts	\$450,000		
Reserves	50,000	Deposits	\$500,000

Suppose, now, that this bank receives a deposit of lawful money of \$50,000. In the first instance, this would alter the relation between reserves, loans, and deposits in the following manner:

Loans and discounts	\$450,000		
Reserves	100,000	Deposits	\$550,000

A 10 per cent reserve against deposits would now amount to \$55,000, so that it is clear that the bank is in possession of an excess or surplus reserve of \$45,000. Inasmuch as \$45,000 is 10 per cent of \$450,000, the bank is in the position—so the argument ran—to increase its loans or investments by the latter amount. If the borrowers took the proceeds of their loans in the form of credits to their deposit accounts, as is usually the case, the relationship between deposits, reserves, and loans after the new loans of \$450,000 had been granted would be shown on the statement in the following manner:

Loans and discounts	\$900,000		
Reserves	100,000	Deposits	\$1,000,000

The reserve has here become 10 per cent of deposits once more, and the bank's deposits have been increased by \$450,000 through the process of making loans of that amount.

Objections to the theory.—The weak spot in this theory is that it fails to consider what would happen to the bank's position after the loans and deposits had been increased to several times the amount of the surplus reserve, as in the foregoing example. Actually, businessmen borrow at the bank because they have payments to make to their creditors. They will accordingly draw checks against the credits that they have received from the bank and send these checks to their creditors in order to discharge their debts. If there were but one bank in the community, and if the community were isolated, the recipients of the checks drawn by borrowers would deposit these checks in the lending bank or present them to the lending bank for encashment in hand-to-hand money. Comparatively few of the checks would be presented for encashment, however, most of them being deposited

with the bank for credit to the accounts of the recipients. Thus the bank would merely debit the deposit accounts of the borrowers and credit the accounts of the recipients of the checks drawn by the borrowers.

In the circumstances just depicted, it would be possible for a bank to extend loans equal to several times the amount of its surplus reserves. As a matter of fact, however, there is more than one bank in the community or the country, so that the banker can never be sure that the checks drawn by borrowers will be redeposited in his own bank. Many, perhaps all, of them will be sent to creditors of the borrower who have accounts in other banks than the one making the loan and who will accordingly deposit the checks they have received in those other banks. When this happens, the banks receiving such checks on deposit will send them back to the lending bank for payment, and the lending bank will lose reserve funds to the full amount of these checks.

To take an extreme case, suppose a bank, which regularly maintains a 10 per cent reserve, shows the following interrelations of deposits, reserves, and loans on its statement:

Loans and discounts	\$400,000			
Reserves	54,000	Deposits	\$440,000	

Since the bank has an excess reserve of \$10,000, suppose, further, that it decides to grant a loan of \$100,000 to a customer, crediting his account with that amount. The items on the preceding statement would then be changed as follows:

Loans and discounts	\$500,000			
Reserves	54,000	Deposits	\$540,000	

Apparently the bank has acted properly, for its reserve is now 10 per cent of its deposits, but this situation is only momentary. Let us assume that the borrower draws a check for the full amount of the loan, \$100,000, and sends it to a creditor who deposits it in another bank. The bank receiving the check on deposit will immediately send it back through the clearing house or collection system to the lending bank for payment. The lending bank will then be confronted with the necessity of paying a check for \$100,000 with a reserve of but \$54,000. In other words, the lending bank would need to have excess

reserve funds to the full amount of the loan, in this particular instance, in order to meet the payment of the check drawn by the borrower, and upon paying the check it would lose reserve funds to the full amount of the loan.

It may be objected to this that the lending bank would not lose the full amount of the loan in reserve funds since it would have checks on other banks (exchanges for clearing) that could be used to pay the check in part or in whole. This objection, however, has no force. Exchanges for clearing, while not reserve, are items that can be turned into reserve upon collection at the clearing house. Thus, if the bank in our example had \$150,000 in exchanges for clearing, and if the borrower's check for \$100,000 were the only one presented for payment at the clearing house, the bank would have a favorable balance of \$50,000; but if the loan had not been made, its favorable balance would have been \$150,000, and its reserve would have been increased by that amount. It is accordingly quite correct to state that the bank would lose reserve funds to the full amount of the loan under the conditions assumed in the example. No matter what may be the bank's balance at the clearing house, it will be less favorable or more adverse than it would have been if the loan had not been made.¹

In a system containing numerous banks, then, it is reasonable to conclude that *to the extent that a borrower draws checks against the proceeds of his loan at the bank and to the extent that these checks are deposited in other than the lending bank*, the bank making a loan will suffer a corresponding loss of reserve funds. But, in order to arrive at the actual state of affairs, it is important to determine to what extent borrowers do check against credits received from the bank, and to what extent these checks are deposited in banks other than the one making the loan.

Professor C. A. Phillips, in an analysis of this problem, has assumed that the great bulk of the checks drawn by borrowers, perhaps 99 per cent,² would be deposited in other banks than the one making the loan, therefore the proportion of redeposited checks would be negligible; but he has esti-

¹ This point has been brought out in Rodkey, R. G., *The Banking Process*, p. 41.

² *Bank Credit*, p. 38. Chapter III contains Phillips' analysis of this question.

mated that the average borrower checks out only about 80 per cent of the amount borrowed and that, consequently, the lending bank does not lose reserve funds to the full amount of the loan. On the basis of these estimates, Phillips calculates that a bank maintaining a reserve of 10 per cent of deposits can extend loans to the amount of \$1219.51 on the basis of a \$1000 surplus reserve without impairing its reserve ratio.³

In criticism of Professor Phillips' initial assumption, J. S. Lawrence has endeavored to show that approximately one-third of the checks drawn by borrowers are redeposited in the lending bank. Because of this factor, he estimates that an individual bank can lend as much as \$1792.19 on the basis of a \$1000 surplus reserve when maintaining a reserve ratio of 10 per cent.⁴

In view of the divergent conclusions of these two writers, it will be worth while to examine with some care the position taken by each of them in order to test its reliability.⁵

The relation of the commercial borrower to his bank.—

One essential factor in the analysis of the extent to which an individual bank creates deposits by making loans is a proper understanding of the relation of the commercial borrower to his bank. It is usually true that the commercial borrower is also a depositor. He maintains the bulk of his "cash"—a certain amount of which is always necessary in his business—in the form of a checking deposit with one or more banks, and it is from this bank, or these banks, that he ordinarily does his borrowing. We should expect a borrower to maintain some balance in the bank, therefore, even at a time when he is indebted to it. The lack of such a balance, or its undue attenuation, would indicate an unsound financial condition on the part of the borrower, upon the improvement of which the bank has a perfect right to insist.

The 20 per cent rule.—The fact that a business enterprise has to maintain some sort of bank balance at all times in order to preserve a sound operating position is significant in determining the importance of the so-called 20 per cent

³ *Ibid.*, p. 71.

⁴ "Borrowed Reserves and Bank Expansion," *Quarterly Journal of Economics*, August 1928.

⁵ The following section follows rather closely an excellent analysis by Rodkey in *The Banking Process*, Chapter XV-A.

rule, upon which Phillips largely bases his contention that the borrower checks out only about 80 per cent of the amount borrowed. This rule is by no means universal in application, nor can it be defined rigidly for all banks that make use of some such regulation. In the majority of cases, however, it signifies either that the bank requires its commercial borrowers to maintain *average* balances throughout the year equal to 20 per cent of the lines of credit granted to them, or that the borrowers are required to maintain average balances of 20 per cent of any amount borrowed during the life of the loan. Many banks have no such requirement, while others demand a balance of 15 or some other per cent instead of 20. In any event, it may be stated that, aside from a few unimportant and sporadic instances, the 20 per cent rule, as described above, represents as severe a requirement as will be found in application among banks in the United States.

Forced balances.—In order to determine whether the application of the 20 per cent rule permits the banks to create deposits through making loans, it is necessary to ascertain whether this rule forces borrowers to maintain larger balances during the life of their loans than are essential to the sound conduct of their enterprises. It is, as a matter of fact, difficult to generalize in this connection since the correct proportion of "cash" to be maintained varies from business to business as well as from season to season in many enterprises. One estimate places the proper proportion of cash (consisting largely of bank balances) held in the bank borrower's business at from 5 to 15 per cent of his current assets,⁶ depending upon the type of business. The borrower's current liabilities are usually not more than half—and often less than half—of the current assets. His "notes payable to banks" ordinarily make up only a part of his current liabilities. It would seem, therefore, that even when cash balances average no more than 5 per cent of the bank borrower's current assets, they would amount to 20 per cent or more of the amount borrowed at the bank.

All that the banks ask, as a rule, is that the balance maintained *average* 20 per cent of the amount borrowed during the life of the loan, or that the *average* balance amount to one-fifth of the line of credit granted. It is quite natural that

⁶ Phillips, C. A., *op. cit.*, p. 165.

a borrower should draw his balance below this figure directly after the loan is granted, and that he should build it up to more than the average as goods are sold and the maturity of the loan approaches. In so doing he is not evading the requirement of the rule. To illustrate, a borrower with an average balance of \$10,000 obtains a loan of \$50,000 for six months. Directly after the loan is granted his balance will stand at, say, \$60,000. As he draws checks against his account to pay his creditors, the balance will be reduced, perhaps to \$5000. He has used not only the amount borrowed, but \$5000 in addition. As his goods are sold, his balance will be increased from time to time, so that it averages \$10,000 during the life of the loan. Naturally, at no time would he allow it to fall to zero as that would place him in a precarious financial position, but he may allow it to fall to the lowest point compatible with safety at some time during the life of the loan, provided that he builds it up later to above the average amount. This is a procedure he would naturally follow in any event.

The foregoing observations should make it clear that the banker is not able, by virtue of the 20 per cent rule, to create deposits by making loans. It may be argued that enterprises with holdings of high-grade, readily marketable securities may operate perfectly safely with a smaller margin of cash than is normally thought necessary, and that compliance with the 20 per cent rule forces them to keep larger balances than are essential to a sound position. Unless such security holdings are being accumulated with the intent of retiring a bond issue or of meeting some unusual current obligation, however, they should be regarded skeptically by the banker who may properly prefer to see such capital utilized in the business in lieu of funds obtained through borrowing at the bank.

In fact, the whole idea that the 20 per cent rule constitutes a means whereby individual bankers can increase their deposits through their lending operations is very largely a myth. The borrower obtains accommodation at the bank because he has payments to make, and the banker may normally expect the entire amount of the loan to be checked against very shortly after the proceeds have been credited to the borrower's deposit account.

Checks redeposited in the lending bank.—While it is reasonable to conclude from the preceding qualifications of Phillips' analysis that the typical borrower checks against the entire proceeds of his loan at the bank, it is necessary to take account of the probability that some of the checks drawn by borrowers will be sent to creditors who will redeposit them in the lending bank. To the extent that this occurs, the lending bank will not lose reserve to other institutions and may thereby lend more than the amount of its surplus reserve. Thus, if we accept Lawrence's estimate that somewhere in the neighborhood of one-third of the checks drawn by borrowers against the proceeds of their loans are redeposited in the lending bank, the latter would lose reserve funds to other banks only to the amount of \$67,000 for each \$100,000 of loans granted.

Without attempting to pass judgment on the accuracy of Lawrence's estimate, it may be pointed out that such an estimate cannot be used in practice by the banker in granting loans to customers for the reason that it is an average for all the banks of the country. In a particular instance, the banker is unable to tell whether or not any of the checks drawn by a borrower will be redeposited in his bank. In one case, 40 or 50 per cent of the checks drawn by a borrower may be redeposited by the recipients; in another, none. Obviously, the conservative banker must operate on the assumption that all of the checks drawn by borrowers will be deposited in other banks. Only in this fashion can he be certain that his reserves will not be unduly depleted.

As a practical matter, the individual banker bases his decision in the matter of granting added loans or of making added investments upon his reserve position. If a prospective borrower wishes to obtain a loan of \$50,000 from a bank, the banker will grant the loan—if the risk is satisfactory—provided that he has \$50,000 of excess reserve. Otherwise, he will either refuse the loan or liquidate some of his secondary reserves or borrow at the reserve bank in order to grant it. Assuming the banker to have \$50,000 excess reserve and to have granted the loan, if \$20,000 of the checks drawn by the borrower are redeposited in the lending bank, it is true that this bank will lose reserve funds only to the extent

of \$30,000 and will thereby still have an excess reserve of \$20,000 that can be loaned or invested. At the time of granting the \$50,000 loan, however, the banker would not be able to depend upon this and would hence confine the amount of his loan to the amount of his surplus reserve.

Taking this view of the matter, there is little reason for maintaining that the individual bank creates deposits for itself through the process of making loans. While some proportion of the funds borrowed may be paid to individuals who will redeposit it in the lending bank, the same thing might occur in a banking system in which checks were not used. Under the latter supposition, a bank with a \$50,000 excess reserve, upon making a loan of that amount, would pay the entire proceeds of the loan to the borrower in the form of cash. The borrower would then use the cash to pay his creditors and some of the latter might then deposit the cash they had received in the bank that had made the loan. This bank would then find its reserve built up again by the amount of these deposits and could again use the excess for the purpose of making added loans. This is approximately what happens in the case of an individual bank under the check system, except that the borrower, instead of taking his loan in cash, gets a deposit credit from the bank and pays his creditors by means of checks drawn against this credit. Of course, to the extent that these checks are deposited by the recipients in the lending bank, the latter does not lose reserve even temporarily, as would the bank with no checking accounts; but since the banker is not in a position to know what proportion of the borrower's checks will be so redeposited, he bases his decision on making loans or investments on his reserve position in the same manner as would the banker who had no checking deposits.

Conclusion.—In conclusion it may be stated that, as a matter of practice, the individual bank lends only the amount of its surplus reserve (or the amount it is willing to borrow from the reserve bank). Thus a bank maintaining a 10 per cent reserve ratio and receiving a deposit of cash or checks on other banks of \$1000 could lend only \$900, after setting aside a reserve of \$100 against the deposit. Theoretically, there are two conditions under which an individual bank

could lend more than it had, or could obtain, in the way of surplus reserve. First, if all or some proportion of the checks drawn by borrowers were redeposited in the lending bank, this might be done. Second, if the other banks of the system were all expanding their loans and investments at the same rate as a particular bank, so that checks drawn by borrowers of the latter bank would be offset in the clearing process by checks drawn by borrowers of the other banks and deposited in the particular bank, then the latter bank would not lose reserve to the other banks of the system and might lend an amount greater than its surplus reserve. However, since the individual banker knows neither the proportion of borrowers' checks which will be redeposited in his own bank, nor the degree of rapidity with which other banks in the system are, or will be, expanding their loans and investments, he is not in a position, in practice, to lend more than the amount of his excess reserve at any time.

The difficulty with the old theory was that it failed to recognize the difference between the individual bank and the banks of the system as a whole. In order to show this difference more clearly, it will be necessary, in the following section of the chapter, to turn our attention to the interrelation of deposits, reserves, and loans in the system of individual banks.

THE SYSTEM OF INDIVIDUAL BANKS

Multiple expansion.—In the system of individual banks, it is to be observed that loans and deposits aggregate several times the reserve funds held by the banks of the system. In other words, one dollar of reserve funds supports loans and deposits of several dollars. The question then arises as to the manner in which the system of banks can expand loans and deposits to several times the amount of its reserves, while the individual bank is able to lend approximately only what it has in the way of excess reserves.

The explanation of this seeming contradiction is to be found in the fact that the loss of reserve funds by an individual bank as a result of its lending operations leads to the acquisition of deposits by other banks in the system. To illustrate, take the case of Bank A, receiving a new cash de-

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posit of \$10,000. Assuming a 10 per cent reserve ratio, this bank could set aside \$1000 as a reserve against the deposit and lend the other \$9000 surplus reserve. After the borrower had checked against the proceeds of the loan and the bank had paid the checks so drawn, the bank's reserve would be decreased by \$9000, loans and discounts would be increased by \$9000, and deposits would remain unchanged. Thus:

Loans and discounts	\$9,000		
Reserves	1,000	Deposits	\$10,000

But the recipients of the checks drawn by the borrower would deposit them in their banks—which we shall designate Banks B.⁷ Upon collecting these checks from Bank A, Banks B would have their deposits and reserve funds each increased by \$9000. Of this amount, \$900 would act as a reserve against the \$9000 of deposits, leaving a surplus reserve of \$8100 available for lending or investment.

Upon lending this \$8100, Banks B would lose reserve funds in the same amount—in the manner already described—to Banks C. The latter group of banks, having its deposits increased by \$8100, would hold \$810 as reserve against this increase, and might then lend \$7290 to customers. This process would be repeated until the original \$9000 surplus reserve of Bank A had been diffused through the entire system of banks. The process is illustrated in part as follows:

	<i>Loans</i>	<i>Reserves</i>	<i>Deposits</i>
Bank A	\$ 9,000.00	\$1,000.00	\$10,000.00
Banks B	8,100.00	900.00	9,000.00
Banks C	7,290.00	810.00	8,100.00
Banks D	5,561.00	729.00	7,290.00
Banks E	5,904.90	656.10	6,561.00
Banks F	5,314.41	590.49	5,904.90
	<u>\$42,170.31</u>	<u>\$4,685.59</u>	<u>\$46,855.90</u>

Up to this point, the original \$10,000 deposit has resulted in an increase of reserves of \$4,685.59, an increase in loans of \$42,170.31, and an increase of deposits of \$46,855.90 in the banking system. Clearly, however, the process of

⁷ Banks B may include Bank A, as would be the case when some of the checks drawn by borrowers of Bank A are redeposited in that bank by the recipients. In like manner, Bank A may be one of the group of Banks C, D, etc.

diffusion has not worked itself out and would continue until, for the banking system, it had approached its limit, at which point we should find reserves of \$10,000, deposits of \$100,000, and loans of \$90,000.

Essential qualifications.—The foregoing analysis, while illustrative of the relations between reserves, loans, and deposits in the banking system, needs some qualification and added explanation.

In the first place, the analysis, to be correct, must postulate an effective demand for loans all along the line. Actually, there may be no such effective demand for additional credit from the banks' own customers. In many instances, the recipients of the checks drawn by borrowers will utilize these funds to retire their own indebtedness to the bank, rather than to build up their deposit accounts.

But, if the recipients of the checks drawn by borrowers use these funds for the purpose of reducing their indebtedness to their banks, the latter will have larger reserves than they need or are required to keep. Suppose, for example, that Bank A makes a loan of \$10,000, that the borrower draws a check for the entire amount to pay to a creditor, and that the creditor deposits the check in Bank B. After Bank B has collected the check, its reserve and deposit accounts will be increased as follows:

Reserves	\$10,000	Deposits	\$10,000
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Suppose, however, that the depositor immediately draws a check for \$10,000 in favor of the bank to repay a loan. The following changes will occur in the bank's balance sheet:

Loans	— \$10,000		
Reserve	\$10,000	Deposits	— \$10,000

That is, the bank's deposits and loans would each be decreased by \$10,000, but its surplus reserve would remain at that figure.

It goes without saying that a profit-making bank would not wish to have an idle surplus reserve that was earning no income for its stockholders. Consequently, in the absence of a demand for loans from its own customers, this excess over reserve requirements would be *invested* in the open

market in acceptances, bonds, commercial paper, or loans to brokers. Let us assume that, in the example just given, the bank purchases \$10,000 worth of government bonds from a New York bond dealer, payment being made with a check on Bank B's reserve account in its Federal Reserve bank. This check will be deposited by the bond dealer in his New York city bank, and, when collected, the New York bank will find its deposits and reserve each increased by \$10,000, while Bank B will have exchanged \$10,000 of surplus reserve for \$10,000 of United States securities. The bond dealer's bank in New York will then have \$9000^a surplus reserve available for lending, and the expansion of loans and deposits will go on as indicated in the preceding section. The same result would have been attained if Bank B had purchased commercial paper or bank acceptances in the open market or had made loans to brokers through its New York correspondent. The deposit account of the commercial paper house, the acceptance dealer, or the broker, respectively, would have been increased by \$10,000 as would the reserve of the depositary bank in New York city.

The second point to be made, then, is that as long as the banks either *lend* or *invest* any surplus reserve that they have available, the result is likely to be the acquisition of deposits by other banks in the system and the expansion of loans *and* investments and deposits to several times the amount of such surplus reserve. If the banks of the system should refrain, however, from diverting commercial deposits into investment channels through the purchase of bonds or the extension of loans to brokers, a period of slackened commercial and industrial activity, resulting in a decreased demand for commercial loans, would be accompanied by an increase in the proportion of reserves to deposits rather than in a complete utilization of surplus reserves.

Before leaving the subject, a third qualification is necessary. If the individual bank had obtained its surplus reserve in the first place by borrowing at the Federal Reserve bank, the subsequent acquisition of new deposits by it might be used

^a Assuming, for simplicity of exposition, a 10 per cent reserve for all banks. Actually, of course, the required reserve is different for central reserve city, reserve city, and country banks; but the assumption of a uniform requirement for all banks does not invalidate the argument presented.

to retire its indebtedness at the Reserve bank. To revert to our previous example, in which we assumed Bank B to receive a new deposit of \$10,000, if Bank B at the time was indebted to its Federal Reserve bank, it would be very likely to use the surplus reserve funds thus obtained to reduce its indebtedness at the Reserve bank by \$9000 in the absence of a continued demand for loans from its own customers. In this instance, the process of expansion throughout the system would be nipped in the bud since the surplus reserve of Bank B has been used to repay indebtedness instead of to make added loans and investments.

Reserve ratio the limiting factor.—In the foregoing discussion, it has been assumed throughout that the reserve ratio maintained by the banks was 10 per cent. This is a convenient ratio to use for purposes of illustration, but it should be clear that when a different ratio is required, as may frequently be the case, the possible expansion of loans and/or investments and deposits in the banking system will be affected accordingly. Thus, the reserves required to be kept behind demand deposits by member banks in the United States average close to 20 per cent at present. With a 20 per cent reserve requirement, total expansion is limited to five times the amount of excess reserves, as compared with ten times in the preceding analysis. If required reserves were 25 per cent, the limit would be four times, while, with a reserve requirement of 50 per cent, it would be only two times.

Although the height of the reserve ratio that the banks are required to maintain is thus basic in determining the limit of check currency expansion in the system, the nature of the analysis presented would be unchanged. The proportion set aside for reserve in each instance would be different, the amount of the overflow to other banks would be different and, therefore, the possible expansion would be different, but the process by which the expansion takes place would be the same, regardless of the reserve ratio required to be maintained by the banks.

Conclusion.—In summing up the conclusions that have been arrived at in this section of the chapter, it may be noted that in the *system of banks* an increase in reserves furnishes the basis for a severalfold expansion of loans and

deposits. In other words, although the individual bank does not lend appreciably more than it has in the way of surplus reserves, the banks of the system as a whole are in a position to increase their loans and deposits to several times the amount of excess reserve acquired by any of the banks in the system. This is possible because the funds that are withdrawn by borrowers are paid to creditors who build up their own accounts by depositing these sums to their credit in their own banks. The latter institutions may then lend a large portion of these deposits and the process is repeated, the original surplus reserve becoming diffused throughout the system until it supports loans and deposits of several times its amount.

In the absence of an effective demand for loans, any bank receiving added reserves through an increase in its deposits may either invest the amount of excess reserve in open market loans or securities, or repay its own indebtedness at the Reserve bank. In the former case the expansion continues, while in the latter it is immediately halted. Barring the existence of indebtedness at the Reserve bank, the individual profit-making institution will not ordinarily hold idle reserves in excess of the amount required by prudence, law, or custom. Consequently, it is to be expected that loans and investments on the one hand and deposits on the other will ordinarily be maintained at the maximum figure permitted by the size of the reserves that the banks insist on keeping.

Through the operation of the clearing and collection system, the checks drawn by the borrowers from a particular bank are largely offset by checks on other banks that have been deposited with this particular bank. Since checks on other banks are claims to immediate payment in reserve funds, the individual banker considers deposits of such checks in the light of cash deposits (after allowing time for their collection), a large proportion of which is available for lending or investment. Inasmuch as the majority of these checks is used to offset other checks at the clearing house, however, the amount of reserves that the banks find it necessary to maintain is sharply reduced, and the check currency takes the places of other media of exchange to a large extent. It is thus apparent that the system of banks in effect creates an

immediate means of payment based on the capital of its customers, which may expand as needed up to a limit set by the reserve ratio that the banks are required, or find it desirable, to keep.

THE FEDERAL RESERVE BANKS

Reserve bank interrelations.—In concluding this analysis, the interrelationships discussed for the individual banks and the system of individual banks should be supplemented with a brief consideration of similar interrelations of the Federal Reserve banks. The problem differs somewhat in the case of the Reserve banks in that these institutions, through the issuance of Federal Reserve notes, are responsible for the creation of the great bulk of our hand-to-hand money at the present time. Thus, we must consider the interrelation of Reserve bank loans and securities not only to deposits, but to note issues as well.

Reserve banks considered as a unit.—In analyzing the interrelationships in question for the Reserve banks, we may simplify the procedure a bit by considering these institutions as a single unit. As a matter of fact, when a Reserve bank discounts paper for a member bank, it is usually for the purpose of preventing a deficiency in the member bank's legal reserve, and the proceeds are therefore not drawn against immediately. Moreover, if one Reserve bank loses funds unduly to other Reserve banks, it is always possible for the Board of Governors to equalize reserve by requiring certain Reserve banks to discount the paper of other Reserve banks.

Under the circumstances, we shall be quite justified in considering the Federal Reserve banks and the Board of Governors in the light of a single central bank with branches and need not consider separately the relation of loans and securities to deposits and notes for the individual Reserve banks and the group of Reserve banks.

Limits of Reserve bank expansion.—Since we are treating the Reserve banks as a unit, the limit of expansion of Federal Reserve notes and Federal Reserve bank deposits is fixed by the reserves, which, under the law, must be maintained against these liabilities. Since the Federal Reserve Act requires the Reserve banks to maintain reserves in gold certificates of

25 per cent of deposits and 25 per cent of Federal Reserve notes in circulation, it is clear that notes and deposits combined may expand to four times the amount of gold certificates that the Reserve banks have available as reserves. Near the end of May 1947, gold certificate reserves of the Federal Reserve banks amounted to \$19.7 billion, which would permit an expansion of notes and deposits combined of \$78.8 billion, as compared with an actual total of \$41.4 billion at that time.

Distinction between note and deposit expansion.—

In considering these expansion possibilities, we must be careful to make a sharp distinction between the expansion of Federal Reserve credit in the form of notes and that in the form of deposits. The reason for this is that the great bulk of Reserve bank deposits consists of member bank reserves.⁹ Such reserves form the basis for a severalfold expansion of check currency by the member banks. Actual reserve requirements, as at present fixed by the Board of Governors, average just over 18 per cent for demand deposits of all member banks. For ease of calculation, however, we shall assume a 20 per cent reserve requirement, which differs but little from actual requirements.

We have already noted that, on May 28, 1947, the Reserve banks had reserves sufficiently large to support additional notes and deposits combined of \$37.4 billion (\$78.8 — \$41.4). Let us assume that this expansion took place in the form of reserve deposits of member banks. On the basis of \$37.4 billion of added reserves, member banks as a group could expand loans and investments and deposits by five times, or in the amount of \$185 billion. On the other hand, if the entire added expansion of \$37.4 billion took place in the form of Federal Reserve notes no further expansion of check currency would be possible, since Federal Reserve notes cannot be counted as reserves by member banks and would be wanted only to meet the demand for hand-to-hand money.

As a matter of fact, if Federal Reserve credit were to expand by the amount noted, the expansion would be partly in reserve deposits and partly in notes. Earlier, in Chapter 12, it was noted that the proportion of money outside the banks

⁹ On May 28, 1947, about 90.7 per cent of Federal Reserve bank deposits were member bank reserves.

to check currency had increased from approximately 20 per cent in 1940 to slightly over 30 per cent in 1946, but that this increase resulted from factors arising out of the war. In the more or less distant future, these special factors will probably disappear. In fact, as regards any *expansion* of hand-to-hand money and check currency *from now on*, it seems reasonable to believe that it would be approximately in the relation of \$1 of hand-to-hand money to \$5 of check currency.

If we accept this proportion of one to five as correct, it is possible to figure the limit of expansion in the banking system on the basis of existing Federal Reserve bank reserves. Since member bank reserve deposits will support check currency of about five times their amount in the banking system, we might properly anticipate that for every increase of Federal Reserve bank credit in the form of reserve deposits there will be a corresponding increase in the form of notes.

Since (May 28, 1947) the Reserve banks have excess reserves of gold certificates sufficient to support an expansion of notes and reserve deposits combined of \$37.4 billion, if Federal Reserve credit were to expand to the limit fixed by the 25 per cent reserve requirement against deposits and notes, we might expect an expansion of \$18.7 billion in Federal Reserve notes and an expansion of \$18.7 billion in member bank reserve deposits. The latter amount would form the basis for an expansion of \$93.5 billion of check currency in the banking system (or five times the increase in Federal Reserve notes).

From this analysis, it appears that the total expansion of notes and check currency combined, which could occur on the basis of the excess Federal Reserve bank gold certificate reserves noted, would be \$112.2 billion, composed of \$93.5 billion of check currency and \$18.7 billion of Federal Reserve notes. Since the Federal Reserve banks are not primarily profit-making institutions, but are designed to maintain sound credit conditions under the policies of the Board of Governors, it is not to be expected that such an expansion will occur. The analysis is merely to show the limit of expansion under present reserve requirements.

Primary and secondary credit expansion.—In closing this discussion, it will be well to draw a distinction between

primary and secondary bank credit expansion. The difference between the two may best be shown by an illustration. Suppose that a number of New York banks have purchased gold abroad and imported it into this country. The gold, which, at \$35 an ounce, is worth, say \$10,000,000, is sold to the Treasury, the banks receiving the Treasury's checks for the latter amount. These checks, when deposited in the Reserve banks, will add \$10,000,000 to the reserve accounts of the New York banks and will constitute excess reserves. On the basis of these excess reserves, loans and/or investments and deposits may be expanded in the banking system by approximately \$50,000,000. This is primary credit expansion.

Suppose, on the other hand, that certain member banks discount paper with the Reserve banks in the amount of \$10,000,000, or that the Reserve banks buy \$10,000,000 of government securities in the market. In either case, member bank reserves will be increased \$10,000,000 and an expansion of \$50,000,000 in the banking system would be possible. Such an expansion of credit is a secondary credit expansion since it is based on reserve funds created by a previous expansion of Federal Reserve bank credit.

This distinction is one that it will be well to bear in mind, as conditions may arise, on occasion, when it is of some considerable significance.

Conclusion.—In previous chapters, we have considered notes and deposits, reserves, loans, and investments, and in this chapter the interrelation of these factors has been analyzed. The commercial banks, or some of them, also perform certain supplementary functions in connection with the financing of foreign trade. Before completing our detailed discussion of the commercial banking process, it will be desirable to describe these foreign exchange functions of the commercial banks. This will be done briefly in the following chapter.

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CHAPTER 18

FOREIGN TRADE FINANCING

Introduction.—The preceding chapters have been concerned with the functions of the commercial bank in extending credit to domestic producers and merchants, and in facilitating domestic exchange through the creation of bank notes and the check currency. In addition to these functions, the banks also perform valuable services in assisting the financing of foreign trade transactions and in furnishing facilities for making foreign payments. This chapter will be devoted to a discussion of these foreign exchange functions.

The nature of foreign trade financing.—Fundamentally, foreign trade is exactly similar to domestic trade, but since in foreign trade buyers and sellers are located in different countries with different business laws and practices and different monetary units, the financing of foreign commerce is somewhat more complicated than domestic trade financing.

One important difference between domestic and foreign trade, so far as this country is concerned, is to be found in the methods used in extending trade credit. Within the United States the open book account is commonly used, the seller specifying on the invoice the length of the credit period allowed as well as discount, if any, for cash payment, and charging the account of the buyer on his books. In foreign trade, on the other hand, the bill of exchange, or draft, is used almost entirely. An exporter in the United States, for example, in selling a bill of goods to a French importing house, will draw a draft against the importer payable upon presentation or so many days after presentation in dollars or francs as the case may be. Or the importer may arrange to have the American exporter draw the draft on his bank in Paris, or on a London bank, instead of against himself. In any event, some sort of draft will be drawn by the exporter,

who will have to have recourse to the foreign exchange department of his bank in effecting its collection or payment.

To cite another example, suppose an American importer has been drawn upon by an English exporter in the amount of £5000 covering payment for a bill of goods and that he must pay the draft before obtaining the goods. The importer has only dollars with which to pay the draft, but the exporter demands payment in pounds sterling. Here again the foreign exchange department of the importer's bank must be called upon. Through that department, the importer can buy a check—drawn by his bank against its account in an English correspondent and payable to the order of the English exporter—for the number of pounds needed and pay for it in dollars at the current rate of exchange on London.

Another way in which the bank assists in foreign financing is by accepting drafts drawn upon itself on behalf of its customer. An importer in New York may wish ninety days' time in paying for a bill of goods imported from Germany. But the German exporter, being without knowledge of the importer's credit standing, is loath to allow the goods to get into the hands of the importer before receiving payment. If, however, the importer can persuade his bank to accept the draft drawn by the German exporter, the latter will be perfectly willing to allow the ninety days' time because he will be protected by the acceptance of a bank of known standing.

The foregoing examples have made it clear, first, that some sort of draft or bill of exchange¹ is used in almost every foreign trade transaction, and second, that the foreign exchange department of a bank is an essential factor in foreign trade financing. Before examining the part played by the bank in more detail, it will avoid confusion if we examine the different types of drafts that are used in this connection.

Types of bills of exchange.—Bills of exchange or drafts used in connection with foreign transactions may be divided into two main classes, bankers' bills and commercial bills. Bankers' bills are drawn by one bank or financial house on another and have no documents attached. They are hence known as clean bills and are frequently payable on demand

¹ These two terms are interchangeable.

or at sight, although at times they are made payable at a definite date in the future.

Commercial bills, like bankers' bills, may be payable at sight, but as a rule they are drawn with a definite or determinable future maturity date. If no documents are attached to the bill, it is known as a clean bill. Thus, if an exporter in the United States draws a draft on an English importer for £5000, and does not attach shipping and other documents to the bill, it is a commercial clean bill. Unless the credit standing of the English importer is exceptionally well known, however, the exporter's bank might hesitate to purchase such a draft since it would be unsecured in the transaction, and even if the draft were purchased by the bank, the rate paid would be less than the rate on secured bills. For this reason, most commercial bills have documents giving title to the goods attached to them and are accordingly known as documentary bills.

D. A. and D. P. bills.—When a documentary bill is payable at sight, it does not have to be accepted by the drawee, as the payment of the draft constitutes its acceptance. In respect to time bills, however, the drawee must ordinarily accept the bill in order to fix the maturity date. A bill drawn at ninety days sight, for example, is a bill payable ninety days after its acceptance by the drawee. Time bills of this sort may be designated either as documentary acceptance—or D. A.—bills, or as documentary payment—or D. P.—bills. In the case of a D. A. bill, the drawee receives the documents, which give him control of the goods, upon acceptance. With respect to D. P. bills, on the other hand, the drawee's acceptance merely fixes the maturity of the bill, and the drawee does not obtain the documents until he pays the bill.

If a D. P. bill is drawn payable at sixty days sight, the drawee has the privilege of waiting sixty days after accepting the bill (plus days of grace in certain countries) before paying it. Should he wish to make payment before the sixty days have elapsed, he may do so at a rebate, the rebate representing interest or discount on the bill for the number of days to its maturity at the time it is paid.

When an exporter who has sold goods to a foreign importer draws a draft directly against the latter, a D. P. bill

is likely to be used unless the importer's name and credit standing are known to be good in the country of the exporter. When the draft is drawn against the importer's bank under a commercial letter of credit, however, it will invariably be in the form of a D. A. bill, since the acceptance of a bank in itself furnishes satisfactory assurance that the bill will be paid at maturity.

Classification of bills.—The preceding discussion may be summed up by classifying the different types of bills described in the form of a table as follows:

- I. Bankers' bills
 - A. Demand—bankers' checks drawn against foreign accounts
 - B. Time—bills of definite future maturity date
- II. Commercial bills
 - A. Sight or demand
 - 1. Clean
 - 2. Documentary
 - B. Time
 - 1. Clean
 - 2. Documentary
 - a. Documents for acceptance
 - b. Documents for payment

Cables.—In making payments to a foreign country, the usual method is to purchase a banker's draft, drawn against his account in that country, and mail it to the foreign creditor. At times, however, it may be necessary to effect a payment in foreign funds immediately, in which event it is possible to buy a cable from the foreign exchange banker. The banker, instead of selling his own check against his foreign account, cables his foreign correspondent to pay the required amount to the party designated by the customer who is buying the cable. The transfer of funds is then effected practically immediately, thus saving the time that would be necessary to mail a sight draft to the foreign country.

While a cable is not exactly a bill of exchange, it accomplishes the same end as a banker's sight draft, with an added saving of time, and should hence be mentioned in a description of the various types of bills used in effecting foreign payments.

The bank acceptance in foreign trade financing.—Space is lacking to permit a detailed consideration of foreign

trade financing.² In such financing, the bank is called upon to assist in at least some phase of practically every transaction. Even when an exporter draws a draft directly on the foreign importer, he will either discount it at his bank or turn it over to the bank for collection, and if the draft is drawn in terms of dollars, the importer, when he comes to pay it, will have to purchase a dollar draft or check from his banker in order to effect a payment. It is, however, with the use of the bank acceptance, rather than these other transactions, that we shall be concerned in this chapter. In fact, it is in the use of this instrument that the bank comes most intimately in contact with the details of foreign trade financing.

Nature of the banker's acceptance.—A banker's acceptance, as pointed out in Chapter 3, is a time draft drawn on a bank and accepted by it. The bank accepts the draft by stamping the word "Accepted" across the face, together with the date and place of payment and the signature of the proper official. A specimen of a banker's acceptance, showing the form and make-up of the instrument, appears in Figure 7 (p. 53).

Having accepted a draft, the bank becomes directly liable for its payment at maturity. In the event of failure of the accepting bank, the holder of the acceptance possesses an equal claim to that of the depositors against the failed bank's assets. In addition to the direct liability of the accepting bank, the drawer of the draft is secondarily liable and the indorsers, if any, are also liable in the order of their indorsement. Furthermore, the acceptance is frequently secured by salable goods, which adds to its safety. Actually, then, the holder of a banker's acceptance is more adequately protected against loss than one of the bank's depositors.

Distinction between acceptances and loans.—In extending an acceptance credit to a customer, i.e., in agreeing to accept drafts in his behalf, a bank does not lend any of its own funds. Rather, it substitutes its own credit standing for that of the customer and thus makes it easy to dispose of the accepted drafts to other banks or investors who are seeking an outlet for temporary surplus funds. Only when a bank

² For detailed information on this score, see Eldridge, F. R., *Financing Export Shipments*, and Towers, G. F., *Financing Foreign Trade*.

buys its own acceptance is it lending money to the customer. Otherwise it is merely lending its credit standing.

This being the case, a bank must obviously use great care in granting acceptance credits. It expects the customer to whom the credit is granted to furnish the funds with which to pay the acceptance when due, but if the customer fails to do so, the bank is nevertheless liable to make the payment. Consequently, the honesty and ability of the taker of the credit to fulfill his obligation to the bank are investigated in an exacting fashion before such a credit is granted.

Financing an import transaction with bankers' acceptances.—For purposes of illustration, consider the case of a New York importer purchasing a bill of goods from a French exporting establishment. The importer wants ninety days' time in which to dispose of the goods and consequently requests credit for that period from the exporter. The French exporting house, while willing to give the ninety days' credit, is uncertain of the credit standing of the importer and so hesitates to draw a D. A. draft on him directly. If the importer, however, will furnish the exporter with a letter of credit on his New York bank, the exporting house will be pleased to extend the desired ninety days' credit. The importer accordingly goes to his bank and obtains the necessary letter of credit.

The commercial letter of credit.—The letter of credit obtained by the American importer from his bank is the bank's authorization to the foreign exporter to draw drafts against it (the importer's bank) up to a specified amount and under certain specified conditions. When "irrevocable" it becomes a direct liability of the bank to accept any draft or drafts drawn against it by the stipulated party, provided that said drafts are drawn according to the instructions contained in the letter of credit. The importer, in order to obtain the letter of credit, must agree to furnish the bank with funds with which to meet the drafts drawn under the letter when they mature, as well as to certain other conditions. The form of this type of letter of credit, together with the agreement between the importer and the bank, is shown in Figures 15 (a) and 15 (b).

Guaranty Trust Company of New York
Foreign Department

Letter of Credit No. _____ New York.

Gentlemen.

We hereby establish our irrevocable credit in your favor for account of

available by your drafts drawn at _____ on the

Guaranty Trust Company of New York, New York

for any sum or sums not exceeding a total of _____

accompanied by commercial invoice, consular invoice, ocean bills of lading

evidencing _____ shipment of _____

Insurance _____

Ocean Bills of Lading must be drawn to the order of _____

The amount of each draft negotiated, with the date of negotiation, must be endorsed hereon.

All drafts drawn under this Credit should bear the clause "drawn under G. T. Co. of N. Y. Letter of Credit
No. _____ dated New York, _____"

We hereby agree with bona fide holders that all drafts drawn by virtue of this Credit, and in accordance with the above stipulated terms, shall meet with due honor upon presentation and delivery of documents as specified to the Guaranty Trust Company of New York, New York, if drawn and negotiated on or before _____

Yours Respectfully,

FIG. 15 (a). LETTER OF CREDIT (AGREEMENT)

To The

New York

Guaranty Trust Company of New York

Gentlemen:

In consideration of the issuance by you of your Letter of Credit No. _____ of which a true copy is on the other side, the undersigned hereby agree to its terms and jointly and severally promise and agree as follows:

1. To provide you or your agent at least one day prior to the maturity of any bills drawn under said Letter of Credit or drafts and/or other instruments drawn in renewal thereof, with funds in New York to the amount thereof, or if any such bills shall be drawn payable at sight, then to provide such funds immediately upon receipt of notice of payment thereof, in either event, together with interest, commission of _____ per cent, and all expenses, and sundry charges, all payments to be made to you in New York City, in United States Gold.
2. The undersigned undertake to insure against all risks all the goods and merchandise shipped under said credits, in companies and form satisfactory to and approved by you, such policies to be so drawn or so assigned or endorsed that all loss occurring thereunder shall be payable to you and to be delivered to you, and notwithstanding any such approval the undersigned assume all responsibility as to the sufficiency and genuineness of the insurance and the solvency and responsibility of the insurers.
3. The undersigned agree that the title to all property which shall be purchased or shipped under or by virtue of said Letter of Credit, the bills of lading and all evidences of title or possession or other documents relating thereto, the policies of insurance and the proceeds thereof, shall be and remain absolutely in your control until payment of the bills above referred to and any and all other sums of money payable on said bills or otherwise and until due payment of any and all other indebtedness now existing or hereafter created or incurred by the undersigned to you in respect of any and all other transactions heretofore or hereafter had with you.
4. Should the market value in New York of the merchandise or goods shipped under said Letter of Credit either before or after its arrival fail so that in your estimation the proceeds thereof, after deducting freight, duties and all other charges will be insufficient to cover your advance there against with commission and interest, the undersigned promise and agree to give you on demand such further security, satisfactory to you in form and amount, as you may require.
5. Goods and merchandise imported under said credit shall be paid for, or at your option security approved by you shall be lodged with you before the undersigned shall be entitled to the surrender or delivery of the documents in respect thereof, which security may be retained and held by you until payment of all moneys heretofore referred to and as security for which you are entitled to hold the said documents, and in the event that you may entrust the undersigned with any of the said goods or merchandise for the purpose of sale, the undersigned consent that you may at any time, in your discretion, repurchase yourselves of said goods and merchandise.
6. The undersigned agree from time to time upon your demand to deliver, convey and transfer to you as security for all indebtedness or liability of the undersigned to you at any time arising under this agreement or otherwise, collateral security of a value and character satisfactory to you, and that you or your agent may hold any goods, merchandise, moneys, deposits or other securities of any kind and nature in your possession or under your control as security for all indebtedness or liability of the undersigned to you.
7. In the event of default in payment of any moneys due and owing to you, or in default in the due observance and performance of any matter or thing herein provided for, or in the event of any suspension, failure, assignment for the benefit of creditors, the filing of any petition in bankruptcy by or against the undersigned or the appointment of any receiver of the property of the undersigned, then and in any such event, the whole of the said moneys owing to you by the undersigned shall at once, without demand, become due and payable. Thereupon, you or your agent are authorized, without previous demand, to sell the whole or any part of the said goods and merchandise, shipped or to be shipped under said Letter of Credit, or sell the same "to arrive," and may also sell without notice of any kind any or all securities deposited with you at public or private sale, applying the proceeds, less the costs and expenses of such sale and any other expenses paid or incurred in respect of said goods, in and towards any indebtedness of the undersigned to you, paying the surplus to the undersigned. If any deficiency shall arise, the undersigned will pay the same to you on demand. At any such sale you may become the purchaser and hold the goods or security, free of any right of redemption.
8. The undersigned agree (agree) that should the beneficiary under said Letter of Credit, upon receipt of advice by cable, or otherwise, of the issuance of said Letter of Credit, but prior to its actual receipt, negotiate drafts by virtue of such advice, such negotiation shall be considered a proper one and shall be included under the terms and subject to all conditions hereof, and in addition thereto the undersigned assume all the risk of the misuse of the said Letter of Credit, and further agree that neither you nor your correspondents shall be held responsible for the correctness, genuineness or validity of any documents provided for or mentioned in said Letter of Credit, or for any fraud, error or falsity therein, or for the description or mis-description, quantity or quality, of the property represented thereby, or purporting so to be, nor for the breach of any contract between the users of the Letter of Credit and the undersigned, nor for any error, interruption or delay in cashing at the request of the undersigned in connection with said Letter of Credit or any transaction thereunder, and that the same shall not be a defense against any obligation under this agreement, and the undersigned will indemnify and save you harmless from all loss and liability, however arising, from or in connection with the said Letter of Credit.
9. The undersigned further agree that the date of any bill of lading shall be conclusive evidence that the goods therein referred to were actually shipped on or before such date, and that unless the terms of said credit specifically require "on board" bills of lading, the term "received for shipment" shall for the purpose of the said credit be equivalent to "shipped" or "shipped on board" and shall be conclusive evidence for the purpose of this credit that such goods were shipped on the vessel named in such bill of lading.
10. In case the undersigned consent to any overdrafts under said Letter of Credit or authorize payment or acceptance of drafts drawn thereunder with irregular documents attached thereto, or authorize or consent to any departure from the terms of the Letter of Credit, this agreement shall be fully binding upon the undersigned in respect to such overdrafts, and notwithstanding such overdrafts, irregularities or variances, this agreement and your title to the documents, merchandise and insurance policies shall be, subsist and remain as though all matters had been done in strict compliance with said Letter of Credit.
11. The obligations of the undersigned and all of your rights under this Letter of Credit or the provisions of any trust receipt issued in connection herewith shall be extended for the full period of any drafts or acceptances issued in renewal or extension of any drafts or bills drawn hereunder and shall continue until full payment thereof has been made, whether the obligors and drawers under such extension or renewal drafts shall be the same as under prior bills or drafts or otherwise.
12. This obligation is to remain in force and be applicable to all transactions, notwithstanding any change in the composition of any firm or firms, parties to this contract, or users of this credit, whether such change shall arise from the accession of one or more partners or from the death or secession of any partner or partners.

FIG. 15 (b). LETTER OF CREDIT (AGREEMENT)

Subsequent steps.—The letter of credit, having been issued by the bank to the importer, is forwarded by mail to the French exporter, who, under its authority, ships the goods, draws a draft against the American bank in dollars for the amount of the bill, attaches the required documents to the draft, and sells the same to his bank in Paris at the prevailing rate of exchange on this type of bill. The Paris banker is perfectly willing to buy the bill, since he is assured by the letter of credit that it will be accepted upon presentation by the American bank. The exporter is accordingly paid in francs and is through with the transaction.

The next step is taken by the Paris banker who sends the bill with documents attached to his correspondent bank in New York. The latter then presents the bill to the importer's bank (on which it is drawn) for acceptance.³ Upon accepting the bill, the importer's bank obtains the documents while the Paris bank's New York correspondent retains the accepted draft.

The disposition of the accepted bill will depend upon the instructions of the Paris bank. It may either be held by the latter's New York correspondent until maturity or it may be discounted immediately in the acceptance market. Assuming that the banker in Paris wishes immediately to build up his account in New York, he will instruct his correspondent to discount the acceptance in the market and credit his account with the proceeds. If this is done, the Paris banker—having received payment in the form of a dollar credit to his New York account—drops out of the transaction.

Meanwhile, the possession of the documents gives the accepting bank control over the goods that have been shipped by the French exporter. But if the importer is to derive any benefit from the ninety-day period until the maturity of the acceptance, he must be able to obtain the goods in order that he may sell them and thereby come into possession of the necessary funds with which to pay his obligation to the bank upon the maturity of the accepted draft. The accept-

³ Of course, if the New York correspondent of the Paris bank should be the same bank as that on which the draft was drawn, the latter would accept the bill as soon as it was received from Paris.

ing bank, on the other hand, by turning over the documents to the importer, parts with its tangible security.

In order to protect the bank and yet permit the importer to obtain the goods, an instrument known as a *trust receipt* is signed by the importer in exchange for the documents. The trust receipt engages the importer to act as agent for the bank in the sale or storage of the goods and to turn over to the bank any sums received from the sale of such goods for the purpose of furnishing the bank with the necessary funds to pay the acceptance at maturity.⁴ The bank in effect retains ownership in the goods, but employs the importer to act as its agent in their disposal.

To complete the transaction, when the acceptance comes due it will be presented to the importer's bank for payment by the party holding it at that time. In the course of the ninety days prior to the maturity of the acceptance the importer will have presumably sold the goods purchased from France and will have furnished the bank with the necessary funds to pay the bill. The bank accordingly pays the acceptance with the funds received from the importer and the transaction is completed.

A concise graphic portrayal of the steps involved in the foregoing type of transaction is given in Figure 16, prepared by the Federal Reserve Bank of Philadelphia.

Financing an export transaction with bankers' acceptances.—The dollar bank acceptance may also be made use of in a somewhat different fashion by the American exporter. For example, suppose that a New York exporting house sells a bill of goods amounting to \$10,000 to an importer in Argentina. The Argentine importer is unable to furnish the exporter with a letter of credit on his bank because of a lack of such facilities in his locality, and the New York exporter consequently draws a sight draft for \$10,000 directly on the importer. He then ships the goods, attaches the documents to the sight draft, and turns it over to his New York bank for collection. Since the draft is drawn at sight, it is payable by the importer upon presentation. There is, however, a

⁴ For a complete discussion of this instrument, see Frederick, K. T., *The Trust Receipt as Security*.

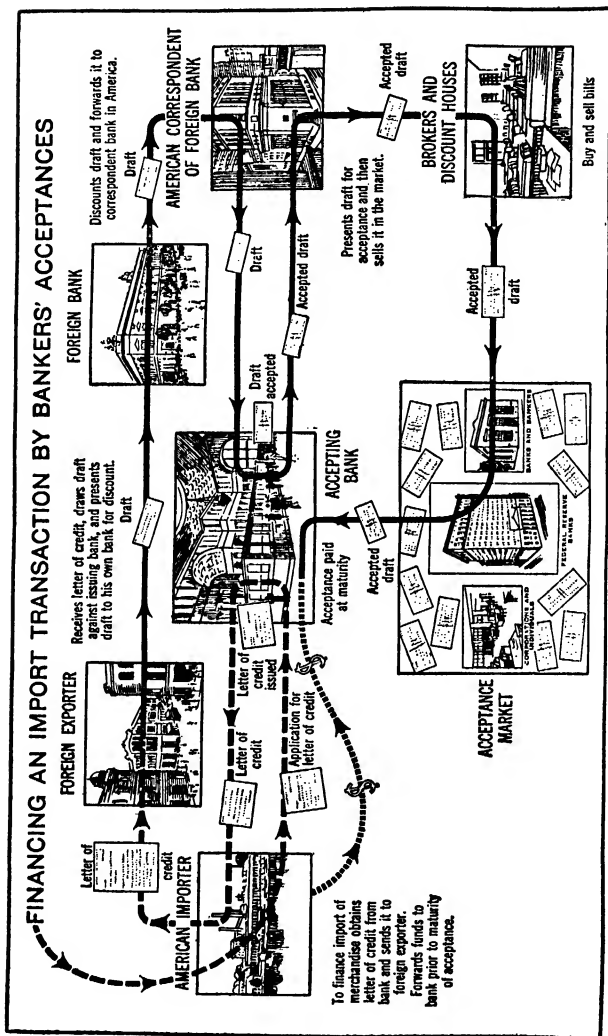


FIG. 16.

(Courtesy of the Federal Reserve Bank of Philadelphia)

considerable period involved in the receipt of payment by the exporter, since the draft must be mailed by his New York bank to a correspondent bank in, say, Buenos Aires, presented for payment by the Buenos Aires bank to the importer, and the payment remitted to the New York bank that is making the collection.

If the exporter is not in immediate need of funds, he may simply await the collection of the draft, in which case no bank acceptance will be used. If, however, the exporter needs funds at once, he may arrange with his bank to draw a draft on it of approximately the amount of the draft on the Argentine importer. The draft would be drawn upon the exporter's bank at, say, sixty days' sight, accepted by the latter, and sold in the acceptance market, the proceeds of the sale furnishing the exporter with immediate funds. Meanwhile, the exporter's bank is protected by the documentary sight draft upon the Argentine importer. The proceeds from the payment of that draft, when remitted to the New York bank, will furnish the funds with which to pay the acceptance that has been made for the New York exporter. This type of transaction is graphically pictured in Figure 17.

American bank acceptances may arise out of export transactions in another fashion. The foreign importer may agree to furnish the American exporter with a letter of credit on an American bank. In such an instance, the foreign importer goes to his own bank, which procures for him a letter of credit on its New York correspondent. The letter of credit is then sent to the exporter who draws a draft on the New York correspondent of the importer's bank, attaches the shipping documents, and sells it to his own bank. His bank presents it for acceptance, turns over the documents to the accepting bank, and sells the acceptance in the market. The New York correspondent of the importer's bank (the accepting bank) sends the documents immediately to the bank of the importer, so that they may be turned over to the importer to enable him to get possession of the goods. Before the acceptance comes due, the foreign importer will furnish his bank with sufficient domestic currency to buy a dollar draft for the amount of the bill. This dollar draft is then forwarded by the importer's bank to its New York correspondent

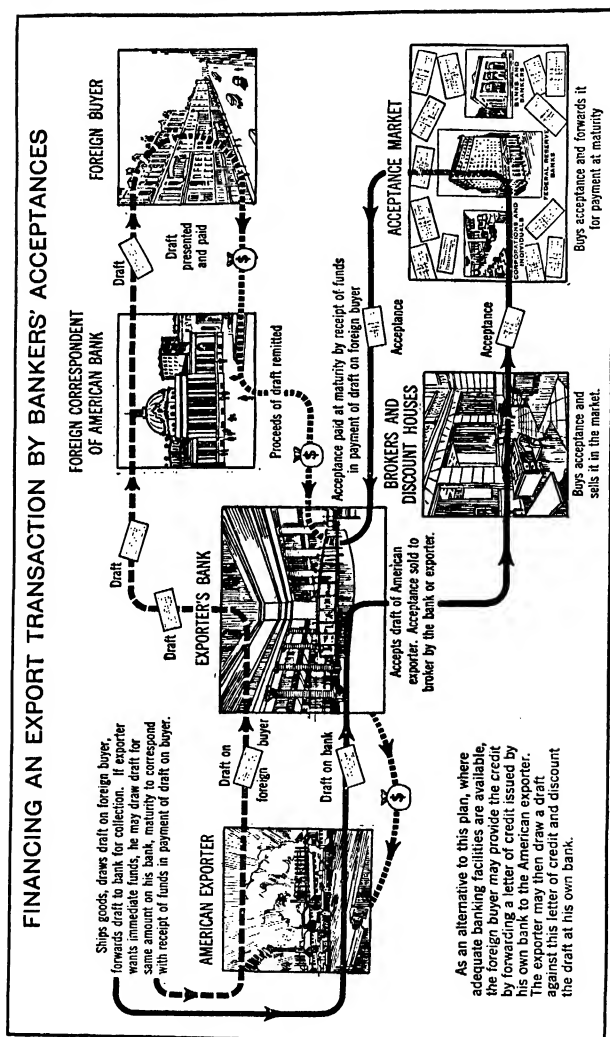


FIG. 17.

(Courtesy of the Federal Reserve Bank of Philadelphia)

in time to furnish the latter with funds to pay the acceptance when it is presented at maturity.

Goods shipped between foreign countries.—The American acceptance market has, in earlier years, financed a large number of transactions arising out of the shipment of goods between foreign countries. To illustrate the nature of this sort of transaction, suppose a German exporter to be shipping a bill of goods to a Brazilian importer. The importer wants ninety days in which to pay for the goods, but his credit standing is not well enough known to the exporter to induce the latter to draw a D. A. draft against him.

Without the required time in which to dispose of the goods, the Brazilian importer would be unable, presumably, to make the purchase. He therefore applies at his bank for a letter of credit on his bank's correspondent in New York. If the application is granted, the letter of credit will be issued authorizing the German exporter to draw on a specified New York bank (the Brazilian bank's correspondent) up to a stipulated number of dollars at ninety days' sight.

The letter of credit is forwarded to the German exporter who then ships the goods, draws a draft upon the New York bank, attaches the shipping documents thereto, and sells the draft to his own bank in Germany at the prevailing rate of exchange for that type of draft on New York. The exporter receives his payment in marks and drops out of the transaction.

The German bank forwards the draft and documents to its New York correspondent to be presented for acceptance. Upon acceptance the draft is discounted in the market and the proceeds are credited to the account of the German bank in its New York correspondent bank. The German bank is then out of the transaction.

The New York correspondent of the Brazilian bank, when it accepted the draft drawn on it by the German exporter, obtained the documents giving it control of the goods. The goods themselves, however, have been shipped to Brazil, so that it is necessary for the New York bank to send the documents immediately to its Brazilian correspondent. The Brazilian bank, upon receipt of the documents from New York, arranges to turn them over to the importer, so that

he may obtain and sell the goods. Some time before the acceptance matures in New York the Brazilian importer will furnish his bank with enough milreis to buy a dollar draft covering the amount of the acceptance. This dollar draft or check is forwarded by the Brazilian banker to his New York correspondent in time to furnish the latter with cover for the maturing acceptance.

Staple products stored in foreign countries formerly also furnished the basis for a considerable number of American bank acceptances. The foreign importer arranges with his bank to draw a draft upon its American correspondent. The sale of the draft puts the importer in funds to carry the stored staple pending its marketing. The American bank on which the draft is drawn is protected by the warehouse receipt for the stored goods. The subsequent sale of the goods furnishes the funds to provide the American bank with cover for the acceptance upon its maturity.

Dollar exchange.—The manner in which foreign bankers may draw drafts on New York banks for the purpose of creating dollar exchange is clearly illustrated by the following example as given by Mr. Wilbert Ward:⁵

“A steamer from the United States arrives at a Central American port with cargo and mail, including documentary sight dollar drafts drawn by the American sellers on the Central American buyers. In the course of a day or two these documentary drafts are presented, simultaneously bringing all the drawees into the exchange market as buyers of dollars. The total of their requirements is likely to exceed the supply of dollar exchange which local bankers have accumulated from local exporters of products to the United States, or otherwise, and which are either already available as dollar deposits in accounts with bankers in the United States, or else in course of transit for collection and credit to these accounts. If these drawees must compete for the inadequate supply of dollars on hand, it is obvious that the result will be a sharp rise in the cost of dollar exchange without any augmentation of the supply, to the detriment of all, and naturally also to the detriment of further trade with the United States. If the local banks have, however, ar-

⁵ *Bank Credits and Acceptances*, pp. 261-62.

ranged acceptance credit facilities with their United States correspondents, the situation is simplified. They can sell their dollar cheques on the United States to the drawees, thus furnishing them with funds with which to take up the trade drafts, and they can simultaneously draw for equivalent sums at ninety days' sight on their American bank correspondents. The cheques and time drafts will arrive here in the same mail. The time drafts will be immediately accepted and discounted and the proceeds credited to the accounts of the Central American banks and thus utilized to cover the cheques. During the ninety days that will elapse before the time drafts mature, the Central American banks can as opportunity affords, and without forcing the market, accumulate and remit the dollar exchange with which to pay the drafts when presented for payment."

The drafts drawn by the Central American bankers against their United States correspondents were drawn for the purpose of creating dollar exchange—i.e., dollar deposits—so that their dollar checks, sold to the Central American importers, would be covered when presented in this country for encashment. Not all foreign bankers, however, are permitted to draw such drafts on American banks. The Board of Governors "has designated the following countries whose usages of trade require the furnishing of dollar exchange, so that member banks may accept drafts drawn upon them by banks or bankers in such countries: Australia, New Zealand, and other Australasian dependencies; Argentina, Bolivia, Brazil, British Guiana, British Honduras, Chile, Colombia, Costa Rica, Cuba, Dutch East Indies, Dutch Guiana, Ecuador, French Guiana, French West Indies, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Porto Rico, San Salvador, Santo Domingo, Trinidad, Uruguay, and Venezuela."⁶

It will be noted from this list that American member banks are permitted to accept drafts drawn on them by banks only of those countries whose trade with the United States is more or less irregular or sporadic. Banks in those countries with which the United States has well-developed trade relations are excluded from the list. The reason for this

⁶ *Digest of Rulings*, Federal Reserve Board, 1928 edition, p. 83.

discrimination is to be found in the fact that drafts of this character are clean bills representing no underlying transaction, but which are nevertheless necessary to encourage satisfactory trade relations with the countries listed. "This relaxation of the visible contact between the acceptance and the mercantile transaction is, however, in no sense intended to countenance the creation of 'finance bills,' drawn virtually for the purpose of procuring a loan from the American money market" ⁷ for financial rather than for trade purposes. Consequently, the use of this type of draft is closely restricted.

The significance of an active acceptance market.—The importance of an active acceptance market in connection with the financing of foreign trade transactions has been made clear by the foregoing illustrations. In each example, an acceptance was discounted in the market and the purchaser of the acceptance furnished the funds by means of which the transaction was financed. Moreover, the necessity of being sure that the acceptance would be purchased in every instance has been amply demonstrated. When an American importer furnishes a French exporter with a letter of credit on his New York bank, the exporter is able to sell the draft drawn under the letter of credit to his own banker only because the latter knows that when the draft is sent over to New York and accepted it can be discounted in the New York bill market, so that his New York account may be credited with the proceeds. Likewise, in each of the other typical transactions reviewed in this chapter, immediate sale of the accepted draft was essential. Without the assurance that acceptances could always be sold at once American banks could not participate as they now do in foreign trade financing.

Conclusion.—This and the preceding chapters in this section of the text have considered in some detail the major features of the banking process. This process is epitomized on the bank statement, which indicates the results of various banking operations, and the following chapter deals with bank statements in some detail and attempts to show the effects of bank operations on such statements.

⁷ Ward, W., *op. cit.*, pp. 259-60.

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CHAPTER 19

THE BANK STATEMENT

The banking process epitomized.—The results of performing the various banking functions that have been considered in earlier chapters are shown in concise form for the individual bank in its periodical statements of condition, and for various groups of banks by combined condition reports that are made up of aggregates of the statements of the individual banks composing the group. The purpose of this chapter is to consider the statements, or condition reports, of both individual and Federal Reserve banks in some detail, to appraise their value, and to describe the systems of bank examinations out of which these statements arise.

A typical statement.—While bank statements, as published periodically, show the various items among the resources and liabilities in varying degrees of detail, a statement that is not too highly condensed is desirable from the standpoint of this analysis. In order to have a statement that is typical of the individual banks of the country and that is sufficiently detailed for our purposes, it seems desirable to use a combined statement of all member banks of the Federal Reserve system. Such a combined condition report for member banks is reproduced on the following page. Since we shall consider it in the light of a statement of a typical member bank of the Federal Reserve system, the amounts, which are in thousands of dollars, will be assumed to be in dollars.

The bank's funds.—In analyzing the statement of condition, the most satisfactory method of approach will be to consider first those items that represent the bank's funds. Then the method of determining what proportion of these funds may be loaned or invested will be discussed, after which we shall be in a position to consider the items that represent the bank's earning resources.

The stockholders' equity.—First in point of time among the funds received by the bank is the initial capital paid in

THE BANK STATEMENT

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MEMBER BANKS—COMBINED STATEMENT OF CONDITION ON JUNE 30, 1947

(Amounts in thousands of dollars)

ASSETS

1. Loans (including overdrafts)	28,655,103
2. United States Government direct obligations	59,188,501
3. Obligations guaranteed by United States Government	9,863
4. Obligations of States and political subdivisions	3,981,537
5. Other bonds, notes, and debentures	2,688,436
6. Corporate stocks (including Federal Reserve Bank stock)	277,982
Total loans and investments	94,801,522
7. Reserve with Federal Reserve Banks	16,040,361
8. Cash in vault	1,408,907
9. Demand balances with banks in the United States (except private banks and American branches of foreign banks)	5,489,091
10. Other balances with banks in the United States	31,588
11. Balances with banks in foreign countries	34,228
12. Cash items in process of collection	5,689,924
Total reserves, cash, and bank balances	28,694,099
13. Due from own foreign branches	284
14. Bank premises owned and furniture and fixtures	798,485
15. Other real estate owned	12,723
16. Investments and other assets indirectly representing bank premises or other real estate	61,204
17. Customers' liability on acceptances	86,430
18. Income accrued but not yet collected	225,637
19. Other assets	116,180
Total assets	124,796,663

LIABILITIES

Demand deposits—Total	87,361,458
20. Individuals, partnerships, and corporations	67,933,240
21. United States Government:	
War loan and Series E bond accounts	910,698
Other	184,465
22. States and political subdivisions	5,375,667
23. Banks in United States	9,612,469
24. Banks in foreign countries	1,360,268
25. Certified and officers' checks cash letters of credit, and travelers checks, etc.	
Time deposits—Total	1,975,642
26. Individuals, partnerships, and corporations	28,073,648
27. United States Government	27,259,348
28. Postal savings	102,564
29. States and political subdivisions	3,327
30. Banks in United States	648,893
31. Banks in foreign countries	38,366
Total deposits	21,150
32. Due to own foreign branches	115,435,106
33. Bills payable, rediscounts, and other liabilities for borrowed money	270,208
34. Acceptances outstanding	50,010
35. Dividends declared but not yet payable	99,109
36. Income collected but not yet earned	51,031
37. Expenses accrued and unpaid	101,529
38. Other liabilities	349,235
Total liabilities	125,580
Total liabilities	116,481,808

CAPITAL ACCOUNTS

39. Capital	2,718,994
40. Surplus	3,701,871
41. Undivided profits	1,401,865
42. Other capital accounts	492,125
Total capital accounts	8,314,855
Total liabilities and capital accounts	124,796,663
Demand deposits adjusted	69,594,634

by subscribing stockholders. In some instances the stock may be sold at a premium at the time the bank is organized. When this happens the par value of the stock is listed as "Capital stock" (item 39) and the amount of the premium is set up on the statement under the head of "Surplus" (item 40).¹ In any event, as soon as the bank has commenced business, a third account—"Undivided profits" (item 41)—is set up. This account is credited as income is earned and is debited as various items of expense, losses, or dividends are paid by the bank.² From time to time, as the undivided profits accumulate, the directors vote to transfer certain amounts from undivided profits to surplus. Actually, this is only a bookkeeping transaction, but it is significant nevertheless as it indicates the decision of the directors to retain such funds permanently in the business.

With the development of the bank's business, a reserve for contingencies may be set up, which may be considered as part of the stockholders' equity. This is included in item 42 in the statement. Items 35 and 37, on the other hand, represent definite amounts to be paid out by the bank and are consequently not included in the capital accounts. Since they differ distinctly from deposits, however, they are mentioned at this point. In the statement under consideration, the capital accounts (items 39-42) amount to \$8,314,855, or approximately 6.7 per cent of total liabilities (including capital accounts).

Gross deposits.—More important by far in amount than the equity of the stockholders are the bank's deposits. Gross demand deposits are defined by the Board of Governors (in Regulation D) to include items 20 to 25 inclusive in the statement while time deposits include items 26 through 31. Total or gross deposits therefore include items 20 to 31 inclusive in the statement. On the date in question, their aggregate amount was \$115,435,106, or some 92.5 per cent of total liabilities plus capital accounts.

As a matter of fact, not all of the gross deposits are

¹ Under Sec. 309 of the Banking Act of 1935, new national banks are required by law to have a paid-in surplus of 20 per cent of their capital before beginning business.

² If a special fund is set aside for the payment of dividends, the dividends, when paid, would be charged to this account rather than to undivided profits.

loaned or invested. Part of them is held in the form of reserve and part represents checks and items that are in process of collection (as defined in paragraph g of the Regulation) and hence are not yet available. The figure for net deposits is the one that depicts more accurately the amount of depositors' funds that may be invested or loaned, although the legal reserve in the Federal Reserve bank and cash held in the bank's own vaults must be subtracted from this item before the amount of actually loanable funds is obtained. The method for obtaining the figure for net deposits will be explained later in the chapter.

Another figure, made available by the Federal Reserve authorities in November 1935, is that for "demand deposits-adjusted." The following explanation of this item from the *Federal Reserve Bulletin*³ will show its purpose:

"These deposits are computed by adding to demand deposits other than those of banks and the United States Government the items of certified and officers' checks and cash letters of credit and travelers' checks and subtracting various cash items reported as on hand or in process of collection. These collection items, given on the asset side of the call report, show in part the amount of so-called 'float' outstanding, which varies considerably from time to time and, together with interbank balances, involves a double counting of deposits for all banks in the country. Cash items forwarded to correspondent banks for collection and credit and charged to such banks are generally included in balances due from banks and cannot be deducted in computing demand deposits-adjusted.

"The figure of demand deposits-adjusted shows in general the amount of balances in the checking accounts of individuals, partnerships, corporations, clubs, associations, and State and local governmental bodies, less a part of the checks outstanding against these accounts, and it may be said to represent in a general way the cash resources of the community placed on deposit with banks and readily available for use."

Borrowed funds.—A third method of obtaining funds for use in the banking business is to borrow them from the Federal Reserve bank or from other banks. Sometimes a mem-

³ November 1935, p. 714.

ber bank will rediscount customers' paper at the Reserve bank and sometimes it will discount its own note or notes. The bank may also borrow in effect by selling securities under an agreement to repurchase them at a specified date. In the statement all of these methods of borrowing are grouped together in item 33.

It will be noted that the sum of all the items representing borrowed funds in the statement is so small as to be almost negligible. The explanation of this is the easy money situation that existed in 1947. While it is not customary for the banks of the country to borrow any very large amounts from other banks, they do borrow substantially from the Federal Reserve banks in times of tight money. Thus, in June 1920, member banks were indebted to the Federal Reserve banks in the amount of well over \$2,000,000,000, and in July 1929, by something over \$1,000,000,000.

Disposition of funds.—The bank's funds, as they become available, are usually either loaned to customers or invested in the open markets. It has been pointed out, however, that the bank's funds cannot all be put to such use, considerable amounts being tied up in the form of reserves or uncollected items. The extent to which deposits and other funds are ordinarily held in this fashion will be made clear by a description of the methods used in calculating the legal reserve requirements for member banks.

Calculation of reserve requirements.—Section 19 of the Federal Reserve Act, as amended by the Banking Act of 1935, sets forth the reserves required of member banks and furnishes the statutory basis for Regulation D of the Board of Governors of the Federal Reserve System. Section 2 of that regulation, dealing with the computation of member bank reserves, reads as follows:

SECTION 2. COMPUTATION OF RESERVES

(a) **Amounts of reserves to be maintained.**—Every member bank of the Federal Reserve System is required by law to maintain on deposit with the Federal Reserve bank of its district an actual net balance equal to three percent of its time deposits plus—

Seven percent of its net demand deposits if not in a reserve or central reserve city.

Ten percent of its net demand deposits if in a reserve city, except that if located in an outlying district of a reserve city or in

territory added to such city by the extension of the city's corporate limits such bank may, upon the affirmative vote of five members of the Board of Governors of the Federal Reserve System, be permitted to maintain seven percent reserves against its net demand deposits.

Thirteen percent of its net demand deposits if located in a central reserve city, except that if located in an outlying district of a central reserve city or in territory added to such city by the extension of the city's corporate limits, such bank may, upon the affirmative vote of five members of the Board of Governors of the Federal Reserve System, be permitted to maintain seven percent or ten percent reserves against its net demand deposits.

Notwithstanding any other provision of this regulation, the actual net balance which each member bank is required to maintain on deposit with the Federal Reserve bank of its district in accordance with the foregoing shall be changed by such percentage, within the limitations prescribed by law,⁴ as the Board of Governors of the Federal Reserve System shall prescribe from time to time pursuant to the sixth paragraph of section 19 of the Federal Reserve Act, as amended by the Banking Act of 1935, in order to prevent injurious credit expansion or contraction.

(b) Deductions allowed in computing reserves.—In determining the reserve balances required under the terms of this regulation, member banks may deduct from the amount of their gross demand deposits the amounts of balances subject to immediate withdrawal due from other banks and cash items in process of collection as defined in subsection (g) of section 1 of this regulation. Balances "due from other banks" do not include balances due from Federal Reserve banks, balances (payable in dollars or otherwise) due from foreign banks or branches thereof wherever located, or balances due from foreign branches of domestic banks. The word "banks" in the term "due from other banks" refers to incorporated banks and does not include private banks or bankers.⁵

(c) Availability of cash items as reserves.—Cash items forwarded to a Federal Reserve bank for collection and credit cannot be counted as part of the minimum reserve balance to be carried by a member bank with its Federal Reserve bank until the expiration of such time as may be specified in the appropriate time schedule referred to in Regulation J. If a member bank draws against checks before such time, the draft will be charged against its reserve balance if such balance be sufficient in amount to pay it; but any resulting impairment of reserve balances will be subject to the penalties provided by law and by this regulation.

⁴ The amount of the reserves required to be maintained by any such member bank as a result of any such change may not be less than the amount of the reserves specified above nor more than twice such amount.

⁵ A member bank exercising fiduciary powers may not include in balances "due from other banks" amounts of trust funds deposited with other banks and due to it as trustee or other fiduciary. If trust funds are deposited by the trust department of a member bank in its commercial or savings department and are then redeposited in another bank subject to immediate withdrawal they may be included by the member bank in balances "due from other banks," subject to the provisions of subsection (b) above.

(d) **Reserve against trust funds.**—A member bank exercising trust powers need not maintain reserves against trust funds which it keeps properly segregated as trust funds and apart from its general assets or which it deposits in another institution to the credit of itself as trustee or other fiduciary. If, however, such funds are mingled with the general assets of the bank, as permitted to national banks under authority of section 11(k) of the Federal Reserve Act, a deposit liability thereby arises against which reserves must be maintained.

(e) **Continuance of "time deposit" status.**—A deposit which at the time of deposit was a "deposit evidenced by a time certificate of deposit," "time deposit, open account," or "savings deposit" continues to be a "time deposit" until maturity or the expiration of the period of notice of withdrawal, although it has become payable within thirty days. After the date of maturity of any time deposit, such deposit is a demand deposit. After the expiration of the period of notice given with respect to the repayment of any savings deposit or other time deposit, such deposit is a demand deposit, except that, if the owner of such deposit advise the bank in writing that the deposit will not be withdrawn pursuant to such notice or that the deposit will thereafter again be subject to the contract or requirements applicable to such deposit, the deposit will again constitute a savings deposit or other time deposit, as the case may be, after the date upon which such advice is received by the bank.

The definition of cash items in process of collection (subsection (g) of section 1 of regulation D) referred to in (b) above is as follows:

(g) **Cash items in process of collection.**—The term "cash items in process of collection" means—

(1) Checks in process of collection, drawn on a bank, private bank or any other banking institution, which are payable immediately upon presentation in the United States, including checks with a Federal Reserve bank in process of collection and checks on hand which will be presented for payment or forwarded for collection on the following business day;

(2) Government checks and warrants drawn on the Treasurer of the United States which are in process of collection;

(3) Such other items in process of collection, payable immediately upon presentation in the United States, as are customarily cleared or collected by banks as cash items.

Items handled as non-cash collections may not be treated as "cash items in process of collection" within the meaning of this regulation.

On the basis of the foregoing regulation for the computation of reserves, the Federal Reserve banks have furnished blank forms to member banks to be filled in with the ap-

THE BANK STATEMENT

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FORM NO. 208B
REVISED 4-16-38

TO FEDERAL RESERVE BANK OF PHILADELPHIA

REPORT OF NET DEPOSITS FOR PERIOD ENDING _____

(OMIT CENTS ONLY)

		GROSS DEMAND <small>SEE ITEM 1 FORM B-18</small>			DEDUCTIONS FROM GROSS DEMAND <small>DUE FROM BANKS SEE ITEM 2-A FORM B-18</small>			CASH ITEMS IN PROCESS OF COLLECTION <small>SEE ITEM 2-B FORM B-18</small>			TIME <small>SEE ITEM 4 FORM B-18</small>		
DAY	DATE	1			2			3			4		
WEDNESDAY													
THURSDAY													
FRIDAY													
TOTAL													

	GROSS DEMAND			DEDUCTIONS <small>(COLUMN 2 PLUS COLUMN 3)</small>			NET DEMAND			TIME		
TOTAL												
AVERAGE												

AVERAGE RESERVE REQUIRED

20% OF AVERAGE NET DEMAND DEPOSITS			
6% OF AVERAGE TIME DEPOSITS			
TOTAL			

The deposit balances at the opening of business each day should be reported for that day. In the case of Sundays and holidays the deposit balances reported should be the balances as at the close of business on the preceding business day.

I CERTIFY THAT THE ABOVE FIGURES ARE CORRECT

(NAME OF BANK)

(LOCATION)

(AUTHORIZED SIGNATURE)

This report is to be properly signed and forwarded promptly to the Federal Reserve bank of Philadelphia at the close of Friday of each week.

FIG. 18. COMPUTATION OF RESERVE TO BE CARRIED WITH A FEDERAL RESERVE BANK BY MEMBER BANK

appropriate figures in calculating their reserve requirements. A form of the type used for member banks in Federal Reserve cities is reproduced in Figure 18. It will be noted that the requirement against demand deposits for this type of bank was 20 per cent on the date of our statement, with a 6 per cent requirement against time deposits. This compared with a requirement of 20 per cent for central reserve city members and 14 per cent for country bank members against demand

deposits, the time deposit requirement being the same for all groups.

The method of calculating the required reserve is clear from the reporting form. Reports must be submitted semi-weekly by member banks situated in central reserve cities and in reserve cities in which a Federal Reserve bank or branch is located. Member banks in other reserve cities submit reports on a weekly basis, while country banks submit reports on a semimonthly basis.

Although the required reserve is a comparatively small proportion of the bank's resources, account must also be taken of excess reserves and of other items that form part of the working reserve of the bank, although not included in the legal reserve. Items 8 to 11 inclusive are of this sort. In addition, item 12 represents funds not yet available for lending or investment. Consequently, items 7 to 12 inclusive, which constitute the total working reserve, may be deducted from the bank's invested funds. The total of these items is \$28,694,099 or over 23 per cent of the bank's total resources.

Loans and investments.—The manner in which available funds are loaned or invested is not shown in detail in the statement under discussion. About the only thing that is clearly brought out in this connection is that item 1—Loans (including overdrafts)—amounts to roughly 30 per cent of total loans and investments and that United States Government securities, comprising some 60 per cent of this total, is unusually large.

As far as loans are concerned, however, some have been made in the open market, some are secured by stocks and bonds, some by real estate mortgages, and some (chiefly business loans) are unsecured. It would obviously be of assistance in analyzing the statement if the "Loans" item were broken up into its component parts.

A fair degree of detailed information concerning the loans of member banks for the date of the statement is available in the *Federal Reserve Bulletin* (October 1947). A statement of the loan account for all member banks for June 30, 1947, shows the following utilization of funds in the extension of loans in the degree of detail afforded by the report in the *Bulletin* just referred to:

THE BANK STATEMENT

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(In millions of dollars)	
Loans—Total	\$28,655
Commercial (including open market paper)	13,820
Agricultural	972
Loans for purchasing or carrying securities	
To brokers and dealers	1,507
To others	1,154
Real estate loans	6,240
Consumer loans	3,998
Other loans	965

This break-up gives us a much clearer idea of the state of the banks' loan accounts than could be obtained from the original statement.

On investments, the *Bulletin* gives but little added information. The break-up of the item of direct obligations of the United States is about the only information not contained in the original statement.

(In millions of dollars)	
U. S. Government obligations	\$59,198
Bills	773
Certificates of indebtedness	7,544
Notes	4,369
Bonds	46,502
Guaranteed	10
Obligations of states and political subdivisions	3,982
Other securities	2,966

Considering the statement as that of a single bank, our typical banking institution appears to be in a very liquid condition, and actually is so from the standpoint of the individual banker.

Acceptances.—The other significant items on the statement have to do chiefly with the acceptance business of the bank. It has already been explained (Chap. 18) that when a bank accepts drafts for its customers it becomes liable for the payment of these drafts at maturity. This liability is shown in the statement in item 34. The customers for whom the bank accepts the drafts, however, agree to furnish the bank with funds to pay them at maturity. An asset account showing the customer's liability to the bank (item 17) is

THE CHASE NATIONAL BANK

OF THE CITY OF NEW YORK

STATEMENT OF CONDITION, DECEMBER 31, 1947

RESOURCES

Cash and Due from Banks	\$1,225,791,684.00
U. S. Government Obligations	1,997,223,842.42
State and Municipal Securities	72,143,547.26
Other Securities	159,297,385.27
Loans, Discounts and Bankers' Acceptances	1,324,264,033.92
Accrued Interest Receivable	9,400,461.83
Mortgages	11,692,930.77
Customers' Acceptance Liability	13,491,128.15
Stock of Federal Reserve Bank	7,950,000.00
Banking Houses	31,101,354.61
Other Assets	4,096,053.21
	<u>\$4,856,452,421.44</u>

LIABILITIES

Capital Funds:

Capital Stock	\$111,000,000.00
Surplus	154,000,000.00
Undivided Profits	<u>57,024,776.27</u>

\$ 322,024,776.27

Dividend Payable February 2, 1948	2,960,000.00
Reserve for Contingencies	17,766,358.56
Reserve for Taxes, Interest, etc.	9,703,411.26
Deposits	4,477,562,449.92
Acceptances Outstanding \$ 20,347,254.88	
Less Amount in Portfolio 4,963,529.20	15,383,725.68
Other Liabilities	<u>11,051,699.75</u>
	<u>\$4,856,452,421.44</u>

United States Government and other securities carried at \$267,760,220.00 are pledged to secure public and trust deposits and for other purposes as required or permitted by law.

Member Federal Deposit Insurance Corporation

therefore carried as an offset to the bank's own liability arising from its acceptance of drafts. Ordinarily, these two accounts are identical in amount, but at times a customer may discharge his liability to the bank before an acceptance comes due, in which case the asset account is credited before the bank's liability has been discharged. This explains the difference between items 17 and 34 on the statement here used.

MELLON NATIONAL BANK AND TRUST COMPANY

Statement at the Close of Business, December 31, 1947

RESOURCES		LIABILITIES	
Cash and Due from Banks	\$325,093,674.62	Capital " " " "	\$ 60,100,000.00
U. S. Govt. Securities . .	497,325,662.28	Surplus	90,000,000.00
Other Public Securities . .	35,259,472.96	Undivided Profits . .	17,341,707.53
Other Securities . . .	89,926,189.30	Reserves	27,297,888.44
Loans and Discounts . .	873,753,258.11	Due Depositors . . .	1,131,027,562.63
Bank Premises . . .	7,266,440.23	Other Liabilities . . .	860,483.50
Other Resources . . .	4,002,944.60		
	<u>\$1,326,627,642.10</u>		<u>\$1,326,627,642.10</u>

United States Government Obligations carried at \$85,318,408.15 are pledged to secure deposits of public monies and for other purposes, as required by law.

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

MEMBER FEDERAL RESERVE SYSTEM

Illustrative statements.—Bank statements as actually published vary considerably in the degree of detail in which the items on the statement are presented. For the purpose of illustration three statements are reproduced here. One is the statement of a central reserve city bank, one of a reserve city bank, and one of a country bank. The statements of the Chase National Bank and the Bethlehem National Bank are moderately condensed, while that of the Mellon National Bank and Trust Company is very condensed. The pamphlets

or reports prepared for stockholders and available to depositors usually contain lists of officers and directors in addition to the statement of condition, and the reports of some of the larger banks may contain considerable added material on earnings, expenses, and other items of interest.

BETHLEHEM NATIONAL BANK

BETHLEHEM, PENNSYLVANIA

Statement of Condition

DECEMBER 31, 1947

<u>RESOURCES</u>		<u>LIABILITIES</u>	
Cash and due from Banks.....	\$ 1,975,767.18	Demand Deposits	\$ 3,067,005.06
U. S. Government Bonds.....	6,546,622.37	War Loan Account	72,675.25
Other Bonds	1,050,955.82	Time Deposits	7,848,671.61
Federal Reserve Bank Stock.....	24,000.00		\$10,988,351.92
G. I. Mortgages.....	380,758.05	Common Stock	300,000.00
Other Real Estate Mortgages.....	1,533,583.34	Surplus	500,000.00
Other Loans	423,895.55	Undivided Profits	117,153.82
Bank Premises (Cost \$168,000)....	40,000.00	Reserve for	
Furniture and Fixtures.....	1.00	Contingencies	31,608.57
Other Assets	1,131.00		\$ 948,762.39
		Reserve for Taxes and Dividends..	40,000.00
TOTAL.....	\$11,977,114.31	TOTAL.....	\$11,977,114.31

TRUST FUNDS\$952,119.09

Critique of bank statement practice.—While it is possible to obtain detailed statements of condition for groups of banks from the publications of the bank supervisory authorities, statements issued by individual banks and made available to depositors and stockholders are frequently of little value. The student of banking who is mainly interested in broad trends in the banking system may be content with the comprehensive statistics that are currently made available by the banking authorities. To the depositor, stockholder, or prospective investor, however, it is the condition of a particular bank, not of a large groups of banks, that is of greatest significance.

The main objection that may be raised to individual bank statements is that they lack sufficient detail for adequate analysis by the interested depositor or investor. In many instances, for example, all loans and discounts will be re-

ported in a lump sum. It would be helpful if this item were broken down into types of loans, such as commercial, agricultural, real estate, security, open market, etc. The matter of loan liquidity is of some moment when considered in relation to the bank's deposits.

In the case of investments a similar criticism may be voiced. It is common for a bank to report its holdings of United States obligations separately, even on the most condensed statement. In many instances, securities of states, municipalities, and other political subdivisions are also reported separately, but frequently they are lumped in with other securities in a single item. In any attempt to appraise the liquidity of the bank's investment portfolio, information on both the maturity and marketability of the securities held is essential. Yet it is not available in the published statements.

On the liabilities side of the statement, deposits are often reported as a single item, although a division into demand and time deposits is fairly common. As in the case of loans and investments, this item should be broken up. A reporting of deposits by specific classes, as on the combined statement of member banks used for analysis earlier in this chapter, would be highly desirable.

From the point of view of the prospective investor or the investment analyst, other objections may be indicated. There is usually no income statement accompanying the statement of condition. As will be apparent in the next chapter, detailed information on earnings and expenses is available for groups of banks, but it is not generally made available to the bank's own depositors and stockholders. Again, many banks do not report the value of "building, furniture, and fixtures" on the asset side of their published statements, or include same at a nominal figure. The same may be true of real estate owned by the bank. This is considered a conservative practice, as these items have been charged off and a hidden reserve thereby established. It distorts the picture of the bank's real position, however, and is not to be advocated.

The foregoing criticisms do not apply to all banks in each particular or in the same degree, but they do apply to a large enough number of banks to make them highly pertinent. Certainly it is true that banks as a group furnish much less

pertinent information to interested parties than is true of the larger and better-known business enterprises at the present time.⁶

Comparative statement analysis.—From the point of view of the system of banks, a good deal of information may be obtained by a comparison of statements of groups of banks on a given date, or of the same group of banks on a series of different dates.

As an example of the first sort of comparison, it is possible to distinguish country banks from reserve city and central reserve city banks by an examination of the combined statements of these three groups of member banks. Without reproducing the complete statements, the items that disclose the chief differences are given in Table 24.

TABLE 24

ITEMS FROM THE STATEMENTS OF MEMBER BANKS DECEMBER 31, 1928,
AND DECEMBER 31, 1932
(In thousands of dollars)

	Central reserve city banks		Reserve city banks		Country banks	
	1928	1932	1928	1932	1928	1932
Loans.....	7,537,414	4,169,417	8,702,347	5,541,560	8,015,494	5,493,073
Investments.....	2,323,576	4,203,192	3,453,627	3,947,931	4,751,577	4,114,297
Cash in vault.....	78,414	64,373	167,273	126,473	318,697	231,992
Due from banks in U. S.....	248,126	409,108	899,258	1,239,605	976,858	766,943
Due from foreign banks.....	239,502	151,600	63,934	39,636	3,514	2,645
Due to banks in U. S.....	1,541,351	1,841,180	1,680,614	1,503,241	427,072	263,228
Due to foreign banks.....	486,888	273,212	54,035	21,470	2,350	1,307
Demand deposits....	6,748,224	5,507,956	6,034,666	4,280,757	6,120,768	3,604,522
Time deposits.....	1,826,601	1,255,858	4,832,306	4,217,439	6,794,404	5,076,282
Acceptances executed for customers.....	700,366	376,004	212,882	51,324	15,081	2,410
National bank notes outstanding.....	39,399	21,315	161,234	268,087	449,260	487,347
Total resources or liabilities.....	16,284,182	11,700,667	16,007,322	12,645,703	16,644,142	11,913,556

Source: Annual Reports of the Federal Reserve Board, 1928 and 1932

Since the total resources or liabilities of the three groups of banks are not far from equal on each of the selected dates, it is possible to make comparisons of the figures for the three different groups of banks on a given date directly

⁶ Those interested in a more detailed criticism of individual bank statements are referred to an article on the subject by Professor Borth. See Daniel Borth, Jr., "Published Financial Statements by Banks," *The Accounting Review*, July 1947, pp. 288-94.

without reduction to percentages. It is to be observed that the most striking differences are found between the country banks and the central reserve city banks, with the reserve city banks occupying a position between the two. As between central reserve city and country banks, it is clear that the proportion of investments, cash in vault, due from banks in the United States, time deposits, and national bank notes outstanding⁷ is much higher for the latter than for the former group, while the proportion of due from and due to foreign banks, due to banks in the United States, demand deposits, and acceptances executed for customers is decidedly higher for banks in central reserve cities. The reasons for these marked variations have been noted in various earlier connections and need not be dwelt on further at this point.

Comparisons in point of time are also possible to a limited extent from the table. The dates used were selected in order to show differences due to variation in business and financial conditions, the first date (December 1928) occurring in a period of decided prosperity, and the second (December 1932) representing practically the bottom of a severe depression. The falling off in loans for all groups of banks is especially marked, as might be expected in the circumstances. In the strong central reserve city banks, most of which were in an impregnable position, investments showed a marked increase from 1928, as is usual in a period of depression. The investments of reserve city banks, on the other hand, were but slightly larger in 1932 than in 1928, while those of the country banks were actually smaller. The explanation of this is probably that many country and some reserve city banks had lost deposits through withdrawals by customers and were hence not in a position to increase their investments as the large and more strongly intrenched city banks had done.

In times of depressed business, country banks ordinarily increase their balances with city correspondents and interior banks generally tend to build up their New York balances. The reserve city banks as a group followed the customary

⁷ After 1935, of course, the retirement of national bank notes served to make the last comparison of historical interest only.

procedure during the great depression as shown by the fact that the item "due from banks in the United States" was markedly larger for this group in 1932 than in 1928. For country banks, however, the same item decreased in the interval. One explanation of this is to be found in the fact that the small country banks were, on the whole, most hard hit by withdrawals by frightened depositors and had found it necessary to draw down their balances with correspondents in trying to meet these demands.

The depression in international business is clearly indicated by the striking decreases in due from foreign banks, due to foreign banks, and acceptances executed for customers on the part of the central reserve city banks between 1928 and 1932. The same items decreased in like fashion in the other two groups, but are not significant there, even in prosperous times.

Finally, national bank notes outstanding, although showing a decrease at central reserve city banks, increased substantially in the other two groups. This increase, which was permitted under a provision of the Home Loan Bank Act, doubtless reveals an effort on the part of some country and reserve city banks to meet the withdrawal of deposits by customers without liquidating investments.

Other comparisons might be drawn for this or some other period, but those noted will suffice to show to some extent the information that may be obtained from an analysis of bank statements of condition as published in detailed form by the banking authorities.

THE FEDERAL RESERVE BANK STATEMENT

Description of statement.—The Board of Governors of the Federal Reserve System releases for publication each week statements of condition of each Federal Reserve bank and of the twelve Federal Reserve banks combined. Although the statement of a particular Reserve bank may be of interest upon occasion, the most significant information is usually found in the combined statement for all the Reserve banks. Such a statement, showing the condition of these banks on December 31, 1946, is reproduced here. No central bank in any other country publishes a report of condition contain-

ing such a wealth of detail as this.⁸ It is not possible here to enter into a detailed description of all the items on the statement, many of which have been considered in earlier chapters. Certain items, however, are revealing of credit conditions and deserve further discussion.

Reserves and other cash.—The only legal reserves of the Federal Reserve banks at present consist entirely of gold certificates. The item "Total gold certificate reserves" is therefore important as it, when considered in conjunction with "Total deposits" and "Federal Reserve notes outstanding" on the liability side of the statement, indicates the degree of expansion of Federal Reserve credit still possible before the legal reserve requirements are reached. The account "Gold certificates with Federal Reserve Agent" indicates the proportion of total gold certificates held as reserve (and security) against Federal Reserve notes, while the items "Interdistrict settlement fund" and "Gold certificates on hand" represent the reserves held on the date of the statement against Federal Reserve deposits.

The fact that approximately two-thirds of the total gold certificate reserves of the Federal Reserve banks are held against Federal Reserve notes as compared with one-third against deposits is not of particular significance. Gold certificates could be transferred from the Federal Reserve agents to the reserve against deposits if necessary by substituting government securities or eligible paper for the gold thus transferred, provided that the gold left with the Federal Reserve agents constituted 25 per cent of outstanding Federal Reserve notes. All that is required by law is that total gold certificate reserves be equal to at least 25 per cent of deposits and 25 per cent of notes.

Although "other cash" cannot be counted as legal reserve, it is the only money in which Federal Reserve notes and deposits may be freely redeemed and a certain amount of this item must accordingly be held by the Reserve banks. Since the moneys comprising this item are in no way superior (and in some instances inferior) to Federal Reserve notes, the only demands for the redemption of the latter are likely

⁸ The weekly statements are not as detailed as the one given here, but they contain a large amount of information nevertheless.

MONEY AND BANKING

STATEMENT OF CONDITION OF THE FEDERAL RESERVE BANKS
(IN DETAIL) DECEMBER 31, 1946¹

ASSETS

(Amounts in boldface type are those shown in the Board's weekly statement.)
(In thousands of dollars.)

Interdistrict settlement fund	5,523,733	
Gold certificates on hand	1,010,444	
Gold certificates with Federal Reserve Agent	<u>11,053,000</u>	
Gold certificates on hand and due from U. S. Treasury	17,587,177	
Redemption fund for Federal Reserve notes	<u>794,116</u>	
Total gold certificate reserves		18,381,293
Other cash:		
United States notes	27,228	
Silver certificates	207,338	
Standard silver dollars	2,539	
National and Federal Reserve Bank notes	6,572	
Subsidiary silver, nickels, and cents	<u>24,213</u>	
Total other cash		267,890
Discounts and advances secured by U. S. Government securities:		
Discounted for member banks	15,739	
Discounted for individuals, etc.	<u>40</u>	15,779
Other discounts and advances:		
Discounted for member banks		
Foreign loans on gold	<u>147,300</u>	147,300
Total discounts and advances		163,079
Industrial loans		550
U. S. Government securities in System open market account:		
Bills	9,839,366	
Certificates	7,496,012	
Notes	355,300	
Bonds	753,390	
U. S. securities—repurchase option (Treasury bills)	<u>4,905,617</u>	
Total U. S. Government securities		23,349,685
Total loans and securities		23,513,314
Due from foreign banks		102
Federal Reserve notes of other Federal Reserve Banks		163,385
Uncollected items:		
Transit items	2,309,786	
Exchanges for clearing house	184,629	
Other cash items	<u>105,159</u>	
Total uncollected items		2,599,574
Bank premises:		
Land	12,796	
Buildings (including vaults)	44,388	
Fixed machinery and equipment	<u>17,069</u>	
Total bank premises	74,253	
Less depreciation	<u>41,821</u>	
Bank premises, net		32,432
Other assets:		
Industrial loans past due	4	
Miscellaneous assets acquired account industrial loans	246	
Miscellaneous assets acquired account closed banks	<u>46</u>	
Total	296	
Less valuation allowances	<u>270</u>	
Net		26
Federal Deposit Insurance Corporation stock		
Federal Agency and other expenses, reimbursable	5,572	
Interest accrued	27,353	
Premium on securities	9,920	
Deferred charges	1,147	
Sundry items receivable	1,420	
Real estate acquired for banking house purposes	2,450	
Suspense account	604	
All other	<u>78</u>	
Total other assets		48,570
Total assets		<u>45,006,566</u>

¹ Before closing books at end of year.

THE BANK STATEMENT

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STATEMENT OF CONDITION OF THE FEDERAL RESERVE BANKS (IN DETAIL)—Continued

LIABILITIES

Federal Reserve notes outstanding (issued to Federal Reserve Banks)	25,741,606	
Less: Held by issuing Federal Reserve Banks	741,169	
Forwarded for redemption	55,133	796,302
Federal Reserve notes, net (includes notes held by Treasury and by Federal Reserve Banks other than issuing Bank)		24,945,304
Deposits:		
Member bank—reserve account	16,137,996	
U. S. Treasurer—general account	392,804	
Foreign	508,016	
Other deposits:		
Nonmember bank—clearing accounts	147,231	
Officers' and certified checks	6,128	
Federal Reserve exchange drafts	614	
All other	159,665	
Total other deposits		313,638
Total deposits		17,352,454
Deferred availability items		2,019,896
Other liabilities:		
Accrued dividends unpaid	882	
Unearned discount	60	
Discount on securities	6,708	
Sundry items payable	2,523	
Suspense account	96	
All other liabilities	26	
Total other liabilities		10,295
Total liabilities		44,327,949

CAPITAL ACCOUNTS

Capital paid in	186,830	
Surplus (Sec. 7)	358,355	
Surplus (Sec. 13b)	27,428	
Other capital accounts:		
Reserves for contingencies:		
Reserve for registered mail losses	6,180	
All other	18,000	
Earnings and expenses:		
Current earnings	150,385	
Current expenses	57,235	
Current net earnings	93,150	
Add—profit and loss	—370	
Deduct—dividends accrued since January 1	10,962	
Net earnings available for charge-offs, re-serves, and surplus	81,818	
Total other capital accounts		105,998
Total liabilities and capital accounts		45,006,560

to result from the need of member banks for silver certificates of \$1 and \$2 denominations or for fractional coin, as Federal Reserve notes are not issued in denominations of less than \$5.

Total discounts and advances.—At the close of 1946, this item, which represents direct borrowing from the Federal Reserve banks, was of negligible importance. Of the total, amounting to only \$163 million, nine-tenths consisted of foreign loans secured by gold, the amount of discounts for member banks being insignificant.

Between the end of World War I and the great depression.

of the thirties variations in this item were a good indication of business conditions. As business activity increased, member bank borrowings at the Reserve banks expanded. This expansion of discounts was accompanied by increasing money rates in the short-term open markets, as the member banks did not remain indebted to the Reserve banks for longer than necessary, and withdrew funds from the money markets to meet the demands of customers or to reduce indebtedness when their borrowings at the Reserve banks were large. A decline in business activity resulted in a decrease of discounts and advances and this decline was accompanied by easier money rates.

The relation between member bank indebtedness and money rates made the item under consideration a good indicator of short-term money rates and business activity in the twenties. After the depression had passed its low point, however, the member banks acquired such large excess reserves as to make borrowing at the Reserve banks unnecessary. Even during World War II, it was not necessary for member banks to borrow at the Reserve banks, for reasons indicated below, so that since the early thirties the item "discounts and advances" has been of no practical significance.

Total United States securities.—As explained in Chapter 16, funds may be put into the market by the purchase of bankers' acceptances or government securities by the Federal Reserve banks. The Reserve banks have purchased practically no bankers' acceptances since the early thirties and held none at the close of 1946. For a good number of years, therefore, Reserve bank operations in the open market have been almost exclusively in government obligations.

Before the great depression, holdings of government securities by the Reserve banks were increased or decreased from time to time in accordance with the decision of the Federal Reserve authorities in regard to the type of credit policy they wished to pursue. An increased holding of governments, therefore, was indicative of an intent to ease the money market while a decrease was an indication of a policy of tightening rates in the short-term markets.

From 1930 on, however, the Reserve authorities pursued an easy money policy. By the end of 1933, Reserve bank holdings of government securities had been expanded to

\$2.4 billion and were held at approximately that figure for a number of years. Beginning in 1939, the Reserve banks began the policy of buying and selling government securities with the purpose of preventing undue short-term fluctuations in the government bond market. These operations had no particular effect on short-term money rates, but were successful in maintaining considerable stability in the yields and prices of government bonds.

With our entry into World War II, the Federal Reserve authorities extended this policy to include rates and yields on all government securities. The pattern adopted was $\frac{3}{8}$ of 1 per cent on Treasury bills, $\frac{7}{8}$ of 1 per cent on certificates of indebtedness and varying rates (depending on maturities) on notes and bonds up to $2\frac{1}{2}$ per cent for the longer term bond issues. An artificially low buying rate of $\frac{3}{8}$ of 1 per cent (with repurchase option) was established on Treasury bills and certificates of indebtedness were discounted at $\frac{7}{8}$ of 1 per cent. Notes and bonds were purchased to the extent necessary to maintain their prices and keep the yields down to the desired point.

Under these circumstances it was unnecessary for member banks to discount paper at the Reserve banks. These banks could adjust their reserve positions when needful by selling Treasury bills to the Reserve banks under repurchase option, and at the end of 1946, as the statement indicates, almost \$5 billion of such bills were held by the Reserve banks.⁹

The huge volume of government securities purchased by the Reserve banks as a result of this war policy is evident from the condition statement. This tremendous expansion of Federal Reserve credit permitted the large expansion of Federal Reserve notes that occurred during the war period without impinging on the reserves of the member banks. These institutions were then able to expand their own credit on the basis of nearly \$7 billion of excess reserves without having to rely on direct borrowing from the Federal Reserve banks.

Other accounts.—The remaining accounts in the Federal Reserve bank combined statement are largely self-explanatory

⁹ The buying rate of $\frac{3}{8}$ of 1 per cent and the repurchase option on new bills was abandoned on July 10, 1947, with the result that the market rate on bills practically doubled.

or have been explained in other connections. "Uncollected items" and "Deferred availability items" arise out of the check clearing and collection activities of the Reserve banks. "Federal Reserve notes" and "Deposits" are of course important items but need no particular explanation. As already noted, their relation to reserves is of especial interest and significance. "Capital accounts" and "Bank premises" are self-explanatory. In fact, the detailed annual statement, as reproduced in this chapter is so complete that most of the items are perfectly clear as presented in the statement itself.

Reserve bank credit and related items.—Before leaving the subject of the Federal Reserve bank statement, it seems desirable to direct attention to the relation between the items that compose Federal Reserve bank credit, member bank reserves, and other related items.

The items that go to make up Reserve bank credit outstanding appear on the assets side of the Federal Reserve bank statement and include "Discounts and advances," "United States Government securities," "Industrial loans," "Acceptances purchased" (if any), and the excess of "Uncollected items" over "Deferred availability items." This excess represents checks in process of collection that have been credited to the reserve accounts of member banks although not yet collected, and is known briefly as the *float*.

Total Reserve bank credit outstanding represents one source, and usually an important source, of funds available for use. There are two other sources, gold stock (which is self-explanatory) and Treasury currency outstanding. The latter item consists of United States notes, Federal Reserve bank notes and National bank notes (both in process of retirement), silver dollars, silver certificates and Treasury notes of 1890, and subsidiary and minor coin.

The uses to which the foregoing funds are put are several. They are (1) money in circulation, (2) Treasury cash holdings, (3) Treasury deposits with the Federal Reserve banks, (4) nonmember deposits, (5) other Federal Reserve accounts, and (6) member bank reserve balances. Of these uses, (1), (3), (4), and (6) are fairly obvious. Treasury cash holdings consist of such items as the gold reserve held behind United States notes, gold in the stabilization fund,

etc. During 1937, for example, the Treasury sterilized gold imports and held the incoming gold purchased in an "inactive gold fund." While this process was going on, the inactive fund was a part of Treasury cash holdings.

Other Federal Reserve accounts, item (5) above, consists chiefly of capital accounts of the Reserve banks. Earnings of the Reserve banks in the way of discount and interest, for example, are removed from the market and are hence not available for other uses. Expenditures of the Reserve banks, on the other hand, release funds for other possible uses.

From the foregoing discussion, it should be clear that the total of the three sources of funds—Federal Reserve credit, gold stock, and Treasury currency—must be equal to the six uses of funds just described. If, therefore, there is a need for increased uses of funds, the sources must increase correspondingly. Or, on the other hand, if one of the sources declines substantially, some other source must increase if the uses of funds are not to be contracted. Since Federal Reserve credit outstanding may be consciously manipulated and has a high degree of elasticity, it is the source of funds that may be expanded or contracted to maintain the desired level on the uses side of the equation.

Reserve bank credit outstanding:	July 1931	October 1931
Bills discounted	195	728
Bills bought	73	681
U. S. Government securities	678	727
Other Reserve bank credit	30	48
Total	976	2184
Monetary gold stock	4662	4005
Treasury currency	2024	2024
Total sources	7662	8213
Money in circulation	4550	5253
Treasury cash holdings	217	225
Treasury deposits with F.R. banks ..	20	32
Nonmember deposits	140	181
Other Federal Reserve accounts	369	356
Member bank reserve balances	2367	2167
Total uses	7663*	8214*

* The slight discrepancy between total sources and total uses is a result of rounding the figures to the nearest million.

An example may make clearer the advantages attaching to the elasticity of Federal Reserve credit outstanding in this connection. The figures (in millions of dollars) for both sources and uses of funds at the end of the months of July and October of 1931 are presented below. The dates chosen are excellent for illustrative purposes since the period in question included the departure of England from the gold standard, which was accompanied by a large loss of gold to abroad and an increase in currency hoarding in the United States.

A consideration of the figures indicates the double strain involved. On the uses side, the increase of over \$700 million in money in circulation (hoarding) was offset only to a slight extent by the decrease of \$200 million in member bank reserve balances. At the same time, the sources of funds felt the impact of a severe decline in the monetary gold stock of something over \$650 million. Since Treasury currency (including National bank notes) remained unchanged, it was necessary for Reserve bank credit to expand substantially to fill the gap if the uses of funds were not to be subjected to an intolerable pressure and contraction. Reserve bank credit met the challenge by expanding on all fronts, the chief increases being in bills discounted and bills bought.¹⁰

Before leaving the subject, it will be well to emphasize the difference between "member bank reserve balances" and the other five uses to which the sources of funds are put. This difference derives from the fact that member bank balances, constituting as they do the required reserves of the member banks, form the base on which the edifice of member bank deposits is built. Since member bank balances comprise only a fraction of deposits, any substantial reduction in this item, unless otherwise offset, would require a severalfold reduction in deposits, provided that the member banks do not have balances substantially in excess of the required legal minimum. Assuming member banks to be operating without substantial excess reserves, heavy payments by their depositors to the government would result in an increase in Treasury deposits

¹⁰ For those interested in other periods than that here chosen, data for 1914-1941 are available in *Banking and Monetary Statistics* (pp. 308-77) and in the monthly issues of the *Federal Reserve Bulletin* for the period since 1941.

with the Reserve banks and a corresponding decline in member bank reserve balances. The total uses of funds would be unchanged in amount, yet there would be a distinct tightening effect on the market as a result of the shift (assuming no offsetting open market purchases by the Reserve banks), for the member banks would be forced either to contract their earning assets or to borrow from the Reserve banks in order to bring their reserve balances into the required relation or ratio to deposits.

The same effect would be observed from a shifting of funds out of reserve balances to any of the other uses, such as money in circulation or nonmember deposits. Conversely, a shifting of funds from any of the other uses to member bank reserve balances would have an easing effect on the market since it would give the member banks excess reserves or if they were indebted to the Reserve banks would enable them to reduce this indebtedness.

Graphic presentation.—In concluding the discussion of member bank reserves and related items, the presentation in graphic form of the courses followed by these items should be helpful. Two charts from different issues of the Federal Reserve Chart Book,¹¹ showing these data graphically from 1917–1933 and from 1932–1946, are accordingly reproduced here. The course of Reserve bank credit during World Wars I and II, the results of hoarding during the great depression, the banking crisis of 1933, the devaluation of the dollar and succeeding heavy imports of gold (matters discussed in various other chapters) are here clearly depicted. The course of excess and required reserves since 1932 is also shown in Chart 7 from the same source.

Conclusion.—A natural sequel to the study of bank statements is a consideration of bank earnings and expenses, since it is the relation of these two factors that generally determines both the soundness and the profitability of a banking institution. The following chapter will accordingly be concerned with these important phases of bank operation. Since the Federal Reserve banks, although at times earning a substantial income, are not concerned primarily with profits, the

¹¹ Now published monthly under the title *Federal Reserve Charts on Bank Credit, Money Rates, and Business*.

CHART 6
MEMBER BANK RESERVES AND RELATED ITEMS

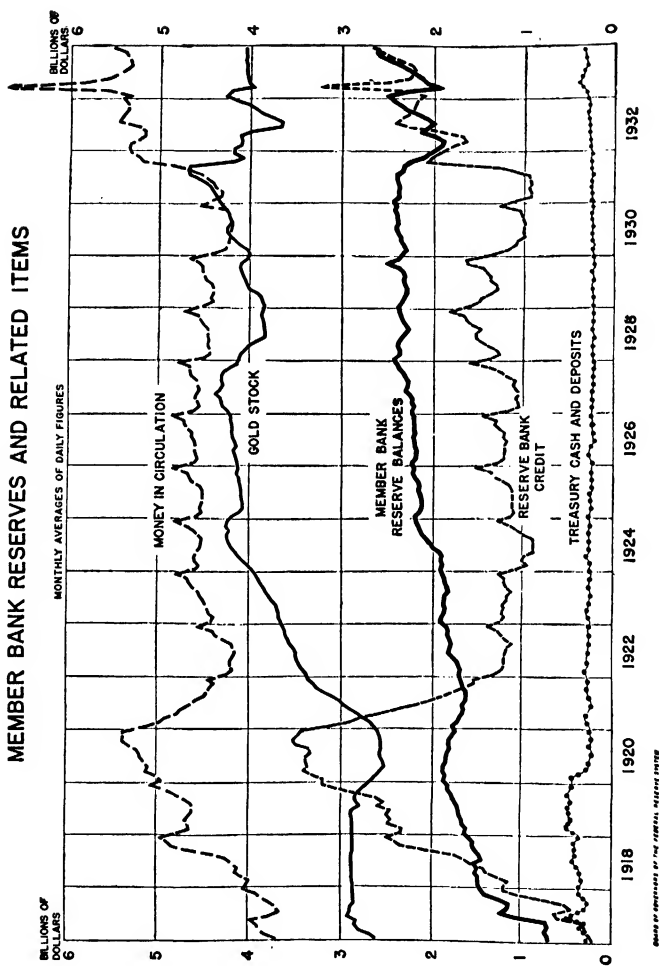
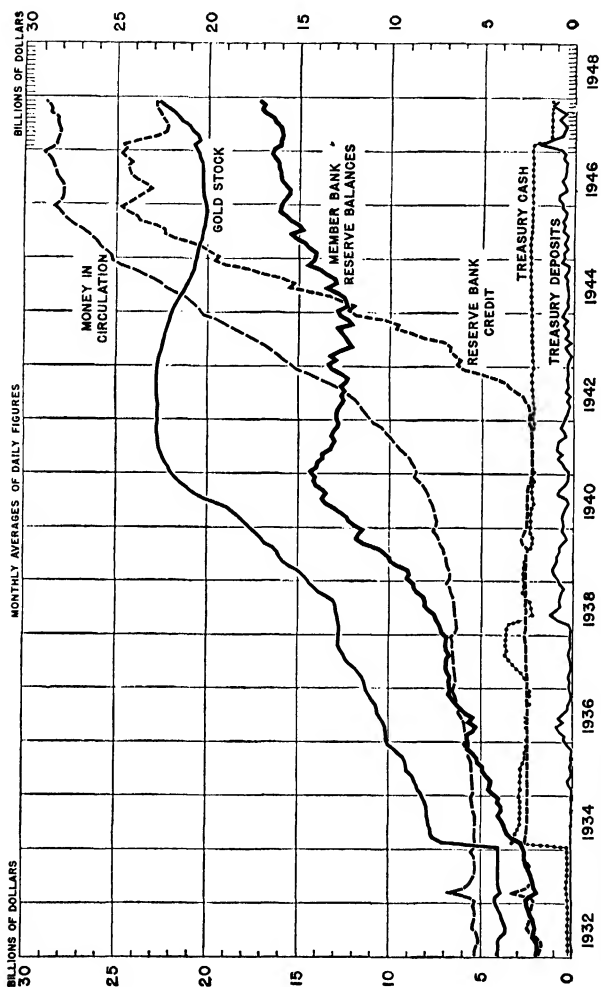
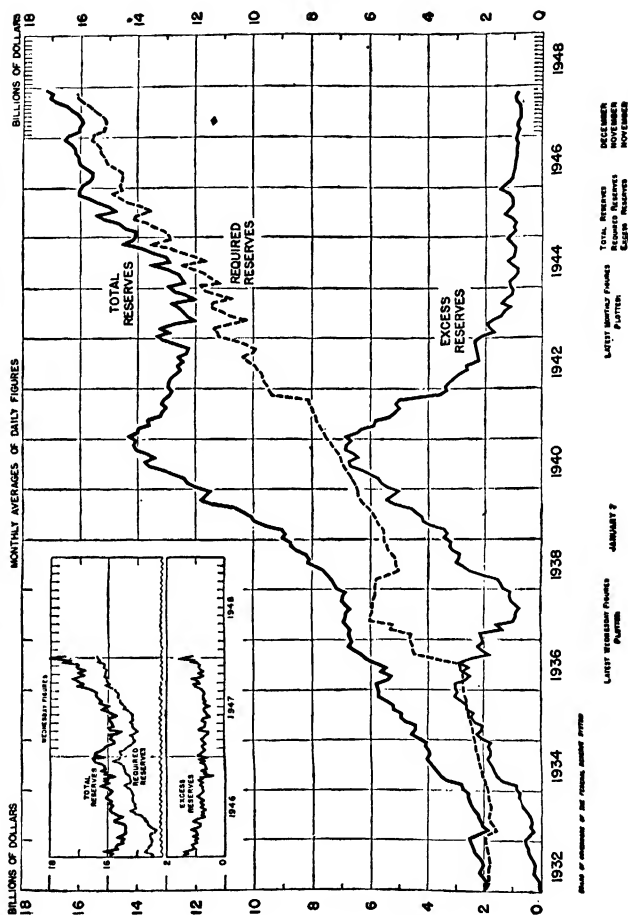


CHART 6 (cont'd)
MEMBER BANK RESERVES AND RELATED ITEMS



Source: Monthly Statement of the Federal Reserve System

CHART 7
REQUIRED AND EXCESS RESERVES OF MEMBER BANKS



discussion in the following chapter will be confined to the earnings and expenses of the individual banks of the system.

REFERENCES

(The following references are for Chapters 19 and 20)

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Schwulst, E. B. *The Extension of Bank Credit*, Chapter X.
Annual Reports of the Board of Governors of the Federal Reserve System.
Annual Reports of the Comptroller of the Currency.
Annual Reports of the Federal Deposit Insurance Corporation.
Federal Reserve Bulletin.
Commercial Bank Management. (American Bankers Association.)
Survey of Bank Operating Ratios. (American Bankers Association.)

CHAPTER 20

BANK EARNINGS AND EXPENSES

Importance of profits.—From the point of view of the individual banker, the purpose of the bank is to earn profits for the shareholders. The bank that is unable to do this with a considerable degree of regularity is a failure. From the standpoint of the public, the purpose of the bank is to provide a safe depository for surplus funds, to extend credit to its customers, and to perform certain services in connection with the transfer of deposits from place to place, etc. In the case of savings deposits, the depositor utilizes the bank as a medium of investment as well as a safe depository. Chief emphasis is placed on safety, however, in both savings and commercial banking, as evidenced by the bulk of banking legislation.

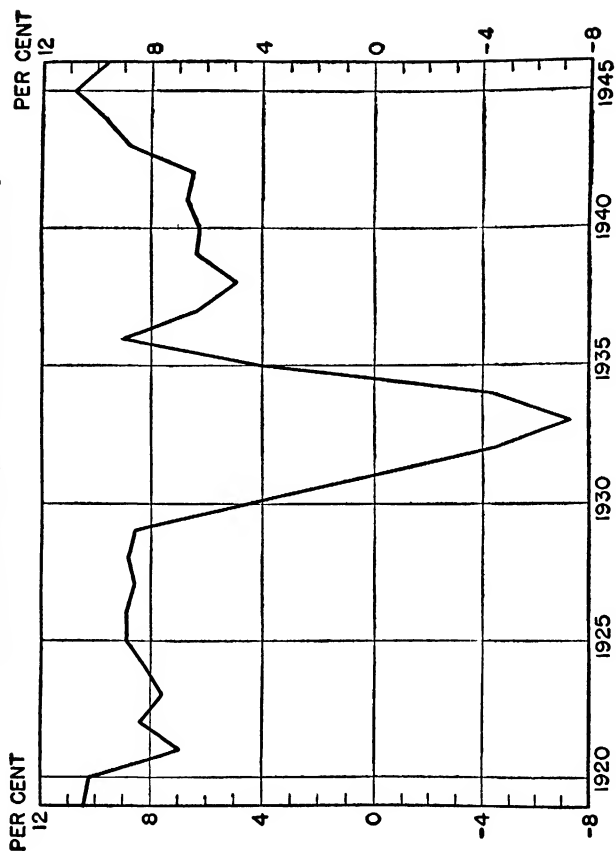
Although these two viewpoints appear to be somewhat opposed to each other at first glance, they are in fact quite the reverse. If a bank is to be profitable in the long run, it will necessarily have to be managed in a safe and sound fashion that offers protection to the interests of the depositors. Losses from unsatisfactory loans and investments—which form one important cause of bank failures—are decidedly unprofitable. It is at times true, of course, that banks may fail when their investments are essentially sound but lack the requisite liquidity to meet the demands of depositors who wish to withdraw their funds. In these circumstances, if the customers would refrain from demanding their deposits, the bank might continue profitably in business. But since depositors have the right to withdraw their funds at any time, liquidity is itself a prerequisite to continuous profitable operation. By and large, therefore, profitable operation and safe operation go hand in hand. The bank that is not able to conduct its business in a profitable manner will not long be safe.

Alteration of the problem.—During the six years prior to our entry into World War II, the problem of conducting a profitable banking business was considerably different from that same problem during the twenties. The major reason for this was the easy money policy of the Federal Reserve authorities, which greatly reduced the yield from loans and discounts and investments. Income was thereby reduced, but, on the other hand, the banks managed to find new sources of income from service charges, fees, etc., while their capital accounts did not keep pace with their earning assets. Consequently, the general level of profits was not greatly below that of the (for banking) prosperous twenties, as indicated in Chart 8. The extremely rapid increase in profits from 1933 to 1936 is explained in large part by recoveries on loans and securities, which were large following the depression. This was naturally a temporary phenomenon, but profits in the years 1937–1942 may be considered as at about normal levels for the conditions existing then.

Again referring to Chart 7, it will be observed that member bank profits rose rapidly from 1942 to 1945, in spite of the fact that the artificially easy money policy was accentuated during the war period, yields on loans and investments declining to record low levels. The explanation of this increase in profits is twofold. First, there was a tremendous expansion of earning assets during the period in question. Loans and securities were 100 per cent greater in 1945 than in 1942. This led to a large increase in dollar earnings, in spite of the low rate of return. Moreover, profits on securities and recoveries exceeded charge-offs and losses in 1943–1945, while this relation was reversed in 1942. Second, capital accounts increased by slightly less than 25 per cent between 1942 and 1945, or only approximately one-fourth as much (percentage-wise) as loans and securities.

The combination of these two factors was sufficient to raise member bank profits to the very high figure of 11 per cent of total capital accounts in 1945. The reduction in the rate of profit in 1946 was the result of a slight reduction in the amount of dollar profits (after income taxes) as compared with 1945 plus an increase of 6.6 per cent in capital accounts. In spite of the decreased rate of profits compared with 1945,

CHART 8

MEMBER BANK PROFITS
AS A PERCENTAGE OF TOTAL CAPITAL ACCOUNTS

profits in 1946 were slightly above those attained in the latter half of the prosperous twenties. However, before proceeding further with the question of the general level of bank profits, an analysis of earnings and expenses is desirable.

Earnings.—To operate profitably a bank must receive more in the way of income than it expends in carrying on its business. Normally, the bank's chief income is derived from loans and discounts, with interest and/or dividends from securities owned ranking second. The vast increase in bank holdings of government securities as a result of the war, however, has reversed this order of importance for the time being. Various smaller amounts of income may also be received from exchange and service charges, fees, etc.¹ For the general run of banks, however, all of these latter items together are far less significant than earnings from either loans and discounts or securities. The relative importance of the different sources of income is shown in the following table for 1946. Income from trust departments constitutes slightly less than half of the income classified in the table as "Other."

TABLE 25
BANKING INCOME PER \$100 OF DEPOSITS
ALL INSURED COMMERCIAL BANKS—1946

Interest and discount on loans	\$0.66
Interest and dividends on securities .....	.98
Service and collection charges, fees, etc. ....	.16
Other .....	.21
Total	\$2.01

Source: Annual Report of the Federal Deposit Insurance Corporation, 1946. Computed from data presented in Table 118, pp. 148-49.

Expenses.—Banking expenses consist of interest paid on deposits and for money borrowed; salaries, wages, and fees; taxes; and miscellaneous expenses. The proportion of expenses per \$100 of deposits attaching to each of these items in 1946 is shown in the following tabulation:

¹ Income of this sort varies a great deal from bank to bank. For example, such income for insured commercial banks having deposits of \$500,000 or less amounted to \$0.56 per \$100 of deposits as compared with \$0.11 for banks with deposits of more than \$100,000,000 and \$0.16 for all insured commercial banks.

TABLE 26

BANKING EXPENSES PER \$100 OF DEPOSITS
ALL INSURED COMMERCIAL BANKS—1946

Interest on deposits and borrowed money	\$0.19
Salaries, wages and fees .....	.58
Taxes (other than income taxes) .....	.07
Other .....	.38
Total	\$1.22

Source: Annual Report of the Federal Deposit Insurance Corporation, 1946. Computed from data presented in Table 118, pp. 148-49.

If we subtract the total current expenses from total current earnings, a figure of \$0.79 per \$100 of deposits is obtained for 1946. This represents net earnings from current operations. To obtain net profits, we must add to this recoveries and profits on securities and loans, etc., and subtract losses, charge-offs, etc. Profits and recoveries exceeded charge-offs and losses by about \$0.08 per \$100 of deposits, which gives net profits before income taxes of \$0.87. Subtracting from this figure income taxes of approximately \$0.24, net profits after taxes amounted to some \$0.63 per \$100 of deposits.

Banks operate on a small margin of profit.—It is clear from the preceding example that the commercial banks operate on a very small margin of profit per dollar of loanable (or investable) funds. The margin for 1946 was considerably lower than in the late twenties when the banks generally had net profits of something over \$1.00 per \$100 of deposits. This is explained in part by the fact that required reserves (for member banks, at least) were greater in 1946 by nearly 100 per cent. Even so, net profits per \$100 of loans and investments was only about \$0.78 in 1946 as compared with \$1.50 in 1929. The remaining difference in net profits was largely due to the difference in yield on loans and investments in 1946 and 1929. In 1946 income on loans was 3.21 per cent and on securities it was only 1.7 per cent. This compares with 5.7 per cent and 4.7 per cent, respectively, in 1929.²

² These comparisons are for member banks since there were no insured banks in 1929.

Return to stockholders higher.—In view of the foregoing comparisons, the question may arise why member bank profits, as shown on Chart 8, were higher in 1946 than in 1929. A part of the explanation is to be found in the elimination of various free services by the banks, a matter that will receive attention shortly. More important than this, however, is the altered relation between earning assets and capital accounts between the two years. Thus, in 1929, the ratio of total capital accounts to loans, securities, and real estate assets of member banks was 17.2. The corresponding ratio for member banks in 1946 was but 7.8. Consequently, although the rate of return on earning assets declined sharply between the two years in question, the amount of earning assets increased greatly in relation to capital funds.

In other words, the member banks were trading on a much thinner equity in 1946 than in 1929. Relatively low earnings on a large volume of earning assets yield a relatively high rate of return on a small volume of capital funds. The dollar volume of earnings in 1946 was sufficient, after meeting all expenses, taxes, etc., to yield a return of 9.6 per cent on total capital accounts of member banks as shown in the chart. Of these earnings, approximately one-third (3.4 per cent of capital accounts) were paid out in dividends. Since, at the end of 1946, the capital stock of member banks amounted to only some 34 per cent of total capital accounts, member bank stockholders, in the aggregate, received dividends of approximately 10 per cent on the par value of their shares.

Changes in bank administration designed to enhance profits.—It was pointed out above that a part of the explanation of the high rate of profits of commercial banks in spite of low money rates had been the efforts of bankers to institute various economies and to try to find new income sources. In the days of higher money rates, for example, the typical bank performed many services without charge. Some of these were incidental to carrying on a banking business, but others were far removed therefrom. The following list, taken from a study made by the Commission on Banking Practices and Clearinghouse Functions of the American Bankers Associa-

tion,³ includes services that were performed without charge by practically all banks:

- Armored car
- Cashier's checks (at par) for payment of non-customers' local bills
- Cashing out-of-town checks for non-customers
- Check books (many banks print special check books and make no charge)
- Collection of bill of lading drafts
- Collection of notes, drafts, and coupons
- Converting foreign moneys into U. S. currency and vice versa
- Credit information (often involving an expensive investigation)
- Currency shipments
- Deposit tickets
- Drawings against uncollected funds
- Endorsement stamps
- Interest on checking accounts
- Interest on proportion of checking accounts (demand deposits) kept as reserve (without interest) with Federal Reserve bank
- Investment advice
- Issuing drafts on other cities
- Making up payrolls
- Novelty savings banks to stimulate savings
- Overdrafts—N. S. F. checks
- Passbooks
- Safekeeping of securities for individuals
- Safekeeping of securities for out-of-town banks (which include clipping of coupons, exchange of bonds, etc.)
- Telegraphic transfer of funds
- "Temporary" safe deposit boxes
- The small checking account
- The small savings account that draws frequently
- Transit items credited at par

In addition to these essential, but generally unprofitable, banking services, the following group of "convenience" services was also listed:

- Collecting subscriptions for charitable purposes
- Collection of school savings
- Collection of fraternal dues
- Delivery of payrolls
- Deposits for newborn babies
- Distribution of bats and balls to boys' clubs
- Distribution of Christmas baskets to needy
- Distribution of seeds

³ *Unprofitable Practices and the Remedy*, Commercial Bank Management, Booklet No. 4.

Employing a veterinarian
 Help on home financing
 Hotel reservations
 Insurance of payrolls
 Letters of congratulation on personal promotions
 Paying customers' household expense bills and charge accounts
 Preparation of individual income tax returns
 Purchase of commutation tickets and charging to customers' accounts
 Research Bureau
 Theater and other amusement reservations
 Ticker tape in lobby
 Travel Bureau
 Weighing scales

The items in this list were obtained as a result of a survey covering about two hundred banks in all parts of the country. Obviously, the services cited in the first list have to be performed, but it would seem reasonable to charge for some of them and many banks have instituted such charges. The majority of the items in the second list are little short of preposterous and have been abolished by nearly all banks. Since the study referred to estimated that these services cost the banks of the country in the neighborhood of \$300,000,000 annually, charging for the necessary ones and abolition of the others has saved the banks a substantial sum.

Another substantial saving has resulted from the decline in interest paid to depositors and on borrowed money. The latter was nominal for member banks in 1946, while the former amounted to approximately \$0.23 per \$100 of loans and investments in the same year. This latter amount compares with a figure of \$2.13 in 1929. The reduction is due to the prohibition of the payment of interest on demand deposits contained in the Banking Act of 1933, and a general reduction of the rate of interest paid on time and savings deposits. The Board of Governors has fixed the maximum rate of interest that may be paid on savings and time deposits at 2½ per cent,⁴ but many banks are paying less. Interest on money borrowed cost member banks less than \$0.002 per \$100 of loans and investments in 1946 as compared with \$0.18 in 1929.

⁴ The maximum rate on time deposits payable in 90 days to 6 months is 2 per cent and on those payable in less than 90 days is 1 per cent.

Exchange, collection, and service charges.—Another source of income that has increased somewhat consists of exchange, collection, and service charges. These amounted to \$0.06 per \$100 of loans and investments in 1929 and to a trifle more than \$0.18 in 1946. Prior to the great depression, service charges on small accounts were frequently fixed arbitrarily, the depositor being charged a flat sum, usually \$0.50, each month that his account fell below a specified minimum or average, such as \$100 or sometimes \$50. After the banking crisis in 1933, the banks in many localities introduced service charges of a more scientific sort that were designed to distribute the cost of handling checking accounts in a fashion that would be equitable to both the depositors and the bank. The method used in computing service charges by the banks in Bethlehem, Pennsylvania, is indicated in the accompanying example and is typical of the analysis to which small accounts are subjected by many banks at the present time.

Service Performed:

8 Paid Checks @ 5¢ each	\$.40
4 Checks Deposited (Drawn on other banks) @ 3¢ each ..	.12
2 Bookkeeping Credits (Deposits) @ 5¢ each .....	.10
2 Items of Cash Deposited @ 3¢ each .....	.06
2 Checks Cashed (Drawn on other banks) @ 5¢ each ....	.10

Overhead:

Maintenance per account per month	<u>.35</u>
Total Service Performed	\$1.13

Calculation of Earnings:

Average Daily Ledger Balance	\$115.00
Less: Average Uncollected Funds	<u>10.00</u>
Available Balance	\$105.00
Less: Cash Reserves, 20%	<u>21.00</u>
Earning Balance	<u>\$ 84.00</u>
Earned for one month at $2\frac{1}{4}\%$ a year	\$.16
Amount Charged This Checking Account	\$.97

All Checking accounts are analyzed in accordance with the above formula, except that, if more than 200 checks are presented against an account in any one month, the first 200 checks are listed at 5 cents each, and the excess over 200 at 3 cents each. No charge is made for any month in which the account is entirely inactive, unless the account remains inactive for six consecutive months. No charge is made if the earnings on the account are sufficient to pay for the service performed.

BANK EARNINGS AND EXPENSES

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Form A

ANALYSIS OF ACCOUNT

JOHN DOE

Name of Depositor

June, 1920

Period of Analysis

Date	Daily Balances		Amounts in Transit				Exchange	
	Dr.	Cr.	1 Day	2 Days	4 Days	8 Days	Paid	Received
1		\$1,900			\$500.			
2		2,000.	\$1,200.					
3		3,010.	1,800.		500.			
4		3,765.		\$1,900.		\$100.		
5		3,765.						
6		1,800.	500.			50.		
7	\$300.				80.			
8		1,000.			270.			
9		4,900.	1,000.					
10		2,200.				500.		
11		3,000.		2,000.	400.			
12		3,000.						
13		4,500.	1,500.		150.			
14	200.					270.		
15		2,700.			510.			
16		3,500.	2,000.					
17		3,900.	1,000.		70.			
18		4,200.		3,000.		180.		
19		4,200.						
20		2,100.			200.			
21		5,700.	1,500.			400.		
22		4,500.			300.			
23	500.							
24		4,360.	1,000.		120.			
25		2,300.		1,000.	200.			
26		2,300.						
27		2,800.						
28		1,500.						
29		2,400.						
30		2,200.						
31								
Totals	\$1,000.*	\$83,500.	\$11,500.	\$7,900.	\$3,300.	\$1,500.		

(a) One Day's
interest on
overdraft
say 17c.

(b) Average
\$2,750 per
day in a
30-day
month.

\$11,500 for 1 day \$11,500
7,900 for 2 days 15,800
3,300 for 4 days 13,200
1,500 for 8 days 12,000
Divide by 30) \$52,500

(*) Supposedly unavoidable debits used
for illustration in analysis.

(c) Average per day \$ 1,750

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Form B

SUMMARY OF ANALYSIS

<i>JOHN DOE</i>	<i>June, 1946</i>
Name of Depositor	Period of Analysis
Income Earning Balance	
1. Average daily balance ((b)—Form A)	\$2,750
2. Less: Average items in transit ((c)—Form A)	1,750
3. Net Cash daily balance	\$1,000
4. Less:	
In vault	(2.9%) 29
Reserve with Federal Reserve Bank . (14.1%)	141
Balances with other banks	(3 %) 30
Income earning remainder	(8c %) \$ 800
	Expense Income
Gross Profit or Loss	
Income earning remainder employed as follows:	
5. Loaned or invested 80% at 3%	2.00
6. Interest:	
Received on overdrafts	
((a)—Form A) \$1,000 at 6%	.17
Gross Profit	2.17
Loss	
Net Profit or Loss	
<div style="display: inline-block; text-align: center;"> ✓ Gross profit or loss brought down... </div>	2.17
Overhead Cost:	
7. Charge for Activity 163 items at .0233 each	3.80
8. Charge for size—cash balance \$1,000 at 2.05 per annum	.17
9. Charge for number at 4.08 per annum	.34
	4.31
Net Profit	2.17
Loss ✓	4.31

A more complicated account analysis, which may be profitably used on larger deposit balances, is illustrated in the accompanying forms. Here, overhead costs are taken into account and the collection time of the items deposited. In the accompanying analysis, Form A shows the analysis of the account day by day throughout the month. Obviously, it was a very active one during the month in question. Three times there were overdrafts for a day and the credits varied widely from day to day throughout the period. Not only was the account active, but a considerable proportion of the deposits was in the form of out-of-town items or items on other banks requiring from one to eight days for collection. Since no exchange charges were either paid or received by the bank, there was a loss of interest on these deposits during the collection period. The method of obtaining the average amount of items in transit per day is shown at the foot of the form—in section (c). To the sum of the 1-day items is added twice the sum of the 2-day items, four times the sum of the 4-day items, and eight times the sum of the 8-day items. The total is then divided by the number of days in the month to obtain the desired figure. The average daily balance is obtained by dividing the total credits less overdrafts by the number of days in the month.

Form B shows the method by which the information tabulated in Form A is used to determine whether or not the account is profitable. From the average daily balance of \$2750 the average daily amount of items in process of collection is subtracted, leaving a net cash daily balance of \$1000. After setting aside the non-earning reserve held against this deposit, the amount remaining—on which income may be earned—is reduced to \$800. The gross profit or loss on the account is next obtained. In this particular case, the account showed a gross profit of \$2.17.

The net profit is obtained by subtracting the overhead cost from the gross profit (or adding it to the gross loss, if any). It will not be necessary here to go into the methods used in allocating this expense among the various divisions of the bank's business. In respect to the present illustration it may merely be noted that out of a total expense of \$35,500 the amount of \$15,696 was allocated to depositors' checking ac-

counts, and that of this amount \$8891 was allocated to activity expense, \$2053 to size expense, and \$4752 to number expense. On this basis, the overhead costs applicable to the account under analysis amounted to \$4.31 which, when offset against the gross profit of \$2.17, resulted in a net loss on the account for the month of \$2.14.

Value of analysis to the bank.—The value of such an analysis is obvious. Without it the banker would be inclined to look on an account as large as the one used in the illustration as a distinct source of profit to the bank. Actually, it is likely to be costing the bank money if it is very active and if the deposits contain a large number of out-of-town items that are not immediately available. In the example here used, it is clear from the summary of the analysis contained in Form B that it is the large float (amounts in transit) that makes this account so expensive to carry. If the bank could earn income at the average rate on the \$1750 average items in transit, it could even pay interest to the depositor and still show a substantial profit on the account. The course of action indicated is therefore the institution of an interest or exchange charge on out-of-town items to cover the loss of interest suffered by the bank during the collection period.

It should be noted, however, that one month's analysis is not a sufficient basis for condemning an account as unprofitable. In certain months a depositor may have a great many payments to make, while at other times of the year his account may be relatively inactive and quite profitable. It is therefore necessary to carry the analysis over a sufficiently long period before passing judgment on the expense or profitability of a given account.

As to collection and exchange charges, it need merely be stated that collection charges are uniformly levied by banks on items requiring such charges in addition to the service charge discussed above, while the exaction of exchange charges is confined to the relatively small number of banks that are not on the par list of the Federal Reserve collection system.

Distribution of bank profits.—We have been concerned, up to this point, with average earnings and expenses of banks located in all sections of the country. If the earnings figures for different sections are examined, however, at times a

rather wide diversity appears. Table 27 shows net profits per \$100 of loans and investments of member banks by Federal Reserve districts for the years 1938 and 1939. These, rather than later, years are used here since they are perhaps more typical of normal banking operations than the war or immediate postwar years would be. The discrepancies are particularly marked for 1938, which was a year of fairly severe depression, as indicated in the table and in Chart 9.

TABLE 27
NET PROFITS OF MEMBER BANKS (PER \$100 OF EARNING ASSETS)

<i>District</i>	1938	1939
Boston	1.00	1.08
New York	0.60	0.83
Philadelphia	0.43	0.91
Cleveland	0.85	1.19
Richmond	1.15	1.14
Atlanta	1.31	1.44
Chicago	1.11	1.28
St. Louis	0.85	1.16
Minneapolis	0.84	1.09
Kansas City	1.62	1.56
Dallas	1.55	1.68
San Francisco	0.79	1.00

Source: *Federal Reserve Bulletin*, May 1940; p. 464.

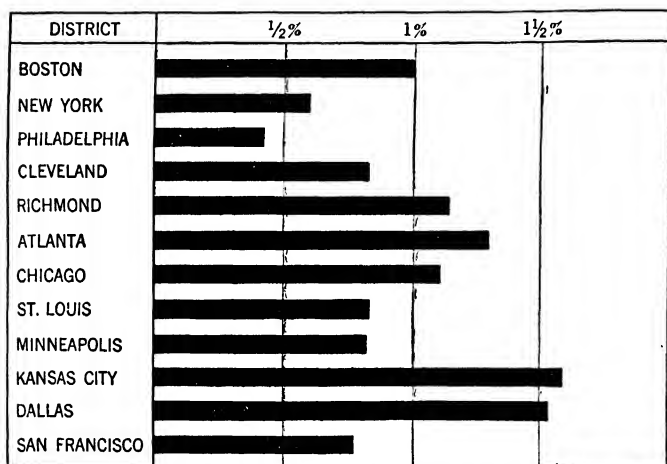
In that year the member banks of the New York, Philadelphia, Cleveland, St. Louis, Minneapolis, and San Francisco districts suffered from unusually small profits, the profits of banks in the Kansas City and Dallas districts were unusually large, and those of banks in the remaining districts were about normal. How is this uneven distribution of bank profits to be accounted for? Was it a result of particularly heavy losses in some sections, or were the banks in the districts showing small profits merely less efficiently operated than those of other districts?

In attempting to answer these questions, attention is directed to Table 28, which shows net earnings, net losses and depreciation, and net profits for 1938 by Federal Reserve districts.

Examination of this table indicates that net losses and depreciation was the factor responsible for the most significant discrepancies in net profits. Thus the net current earnings in the Philadelphia district were higher than in any of the other districts except Kansas City and Dallas, yet net profits were far below those of any other district as a result of ex-

CHART 9

MEMBER BANK PROFITS AS A PERCENTAGE OF EARNING ASSETS.
By FEDERAL RESERVE DISTRICTS—1938



Source: *Federal Reserve Bulletin*, May 1940.

tremely large losses. Kansas City, on the other hand, showed a small net gain, which gave her banks the largest net profit of any district. The banks of the other districts showing small profits also had substantial net losses, although not nearly as large as in the Philadelphia district.

In the districts showing net profits of less than \$1.00 per \$100 of loans and investments the proportion of losses on loans to losses on investments varied considerably as shown in Table 29. In the San Francisco district, losses on loans were much higher than on investments. In the Philadelphia district, the two were nearly even, while in the remaining

TABLE 28

MEMBER BANK EARNINGS 1938 (PER \$100 OF EARNING ASSETS)

<i>District</i>	Net current earnings	Net losses and depreciation on securities, etc.	Net profits
Boston	1.29	0.29	1.00
New York	1.03	0.43	0.60
Philadelphia	1.53	1.10	0.43
Cleveland	1.25	0.40	0.85
Richmond	1.39	0.24	1.15
Atlanta	1.52	0.21	1.31
Chicago	1.12	0.01	1.11
St. Louis	1.19	0.34	0.85
Minneapolis	1.15	0.31	0.84
Kansas City	1.61	0.01 *	1.62
Dallas	1.75	0.20	1.55
San Francisco	1.28	0.49	0.79

* Net gain.

Source: *Federal Reserve Bulletin*, May 1940; p. 464.

districts losses on investments exceeded losses on loans by more or less substantial amounts.

Profits reduced heavily by losses.—The evidence presented is indicative of the fact that losses on bad debts or on investments are a significant factor in reducing bank profits. Those banks that are able to keep these losses down to a

TABLE 29

GROSS LOSSES ON LOANS AND INVESTMENTS—1938

<i>District</i>	Gross losses on loans per \$100 of loans	Gross losses on investments per \$100 of investments
New York	\$.92	\$1.00
Philadelphia	1.32	1.34
Cleveland .....	.60	.86
St. Louis .....	.51	1.19
Minneapolis .....	.69	1.04
San Francisco	1.02	.55

Source: *Federal Reserve Bulletin*, May 1940.

minimum are practically certain to add consistently to their profits even when their regular operating expenses are relatively heavy. The methods by which losses can be reduced have been described in earlier chapters. By maintaining an efficient credit department and by careful analysis of the investments purchased it is usually possible to prevent losses from assuming dangerous proportions. In connection with long-term investments, however, the bank is frequently subjected to losses because of adverse price movements in the securities market over which it can exercise no control. Even such losses may be averted to some extent by investing so far as possible in short-term paper that is not subject to marked price fluctuations.

Conclusion.—While the problem of earning satisfactory profits has not been acute during the war and immediate postwar years, the situation in the years preceding the inauguration of the defense program should not be forgotten. A downturn in business could bring with it substantial losses to bankers. The banker should use great care in extending loans under present (end of 1947) conditions with a view to avoiding subsequent losses in the event of a reversal of the existing inflationary trend.

PART IV
COMMERCIAL BANKING PROBLEMS

CHAPTER 21

BANK FAILURES—DEPOSIT INSURANCE

Introduction.—For more than a decade the overwhelming majority of banks in the United States have participated in the deposit insurance plan, which was first instituted under provisions contained in the Banking Act of 1933. In fact, deposit insurance is now accepted as an integral part of the American banking set-up. At the time of its introduction, however, it was viewed skeptically by a considerable number of bankers and students of banking. This being the case, it seems desirable to go into the question of deposit insurance in some detail, especially in view of its successful operation for a fairly extended period.

The deposit insurance provisions of the Banking Act of 1933 were a direct result of a long series of bank failures in the United States, culminating in the banking crisis of 1933. As a background for a consideration of deposit insurance in the United States, it will accordingly be desirable first to consider in some detail the run of bank failures that preceded its introduction into the banking system.

BANK FAILURES

Number of failures large.—One of the most disturbing features of the banking situation during the predepression decade was the unusually large number of bank failures. In the ten years 1921-1930, a total of 6987 banks with capital of \$332,466,000 and deposits of \$2,586,388,000 became insolvent. The failure of approximately 7000 banks in a ten-year period was adequate cause for serious concern.

The dismal record of bank failures, showing the number of banks suspended according to class of bank, capital stock, and size of town or city of location, is reproduced in the accompanying tables from the Annual Report of the Federal Reserve Board for 1930.¹ The different bases of classification

¹ Pp. 131 and 133.

TABLE 30—BANKS SUSPENDED AND REOPENED, BY YEARS, 1921-1930

Class of Bank and Year	Banks Suspended			Banks Reopened		
	No.	Capital	Deposits	No.	Capital	Deposits
All banks:						
1921.....	501	\$22,802,000	\$196,460,000	60	\$1,918,000	\$17,493,000
1922.....	354	13,743,000	110,721,000	65	4,003,000	35,565,000
1923.....	648	21,943,000	188,701,000	37	1,516,000	11,674,000
1924.....	776	28,358,000	213,338,000	94	2,815,000	22,462,000
1925.....	612	24,441,000	172,900,000	62	1,994,000	16,618,000
1926.....	956	32,804,000	272,488,000	149	5,134,000	60,610,000
1927.....	662	24,763,000	193,891,000	95	3,906,000	35,729,000
1928.....	491	19,715,000	138,642,000	39	1,540,000	15,727,000
1929.....	642	32,254,000	234,532,000	58	3,052,000	25,829,000
1930.....	1,345	111,643,000	864,715,000	147	6,802,000	61,599,000
<i>Total.....</i>	<i>6,987</i>	<i>332,466,000</i>	<i>2,586,388,000</i>	<i>806</i>	<i>32,680,000</i>	<i>301,306,000</i>
Member banks:						
1921.....	70	5,369,000	42,503,000	10	475,000	3,132,000
1922.....	57	3,956,000	24,243,000	24	1,580,000	11,618,000
1923.....	124	6,845,000	51,228,000	14	685,000	5,068,000
1924.....	159	10,305,000	74,469,000	20	860,000	7,190,000
1925.....	146	9,920,000	67,264,000	14	800,000	6,779,000
1926.....	160	8,569,000	68,812,000	14	710,000	8,179,000
1927.....	124	8,034,000	66,336,000	11	845,000	8,311,000
1928.....	73	5,175,000	42,240,000	5	325,000	6,610,000
1929.....	81	7,125,000	57,135,000	5	285,000	2,273,000
1930.....	187	50,410,000	380,440,000	7	450,000	3,538,000
<i>Total.....</i>	<i>1,181</i>	<i>115,708,000</i>	<i>874,670,000</i>	<i>124</i>	<i>7,015,000</i>	<i>62,698,000</i>
National banks —						
1921.....	51	3,060,000	21,285,000	8	325,000	2,499,000
1922.....	45	3,335,000	19,092,000	22	1,330,000	8,076,000
1923.....	90	4,610,000	32,904,000	11	570,000	3,973,000
1924.....	122	7,660,000	60,889,000	18	785,000	6,895,000
1925.....	118	7,970,000	58,537,000	11	700,000	6,300,000
1926.....	125	6,020,000	47,866,000	10	490,000	4,665,000
1927.....	91	5,415,000	46,581,000	8	485,000	5,073,000
1928.....	57	4,200,000	31,619,000	2	75,000	417,000
1929.....	64	5,095,000	37,007,000	3	160,000	1,607,000
1930.....	161	19,675,000	173,290,000	5	310,000	1,872,000
<i>Total.....</i>	<i>924</i>	<i>67,040,000</i>	<i>529,070,000</i>	<i>98</i>	<i>5,230,000</i>	<i>41,377,000</i>
State banks —						
1921.....	19	2,309,000	21,218,000	2	150,000	633,000
1922.....	12	621,000	5,151,000	2	250,000	3,542,000
1923.....	34	2,235,000	18,324,000	3	115,000	1,095,000
1924.....	37	2,645,000	13,580,000	2	75,000	295,000
1925.....	28	1,950,000	8,727,000	3	100,000	479,000
1926.....	35	2,549,000	20,946,000	4	220,000	3,514,000
1927.....	33	2,619,000	19,755,000	3	360,000	3,238,000
1928.....	16	975,000	10,621,000	3	250,000	6,193,000
1929.....	17	2,030,000	20,128,000	2	125,000	666,000
1930.....	26	30,735,000	207,150,000	2	140,000	1,666,000
<i>Total.....</i>	<i>257</i>	<i>48,668,000</i>	<i>345,600,000</i>	<i>26</i>	<i>1,785,000</i>	<i>21,321,000</i>
Nonmember banks:						
1921.....	431	17,433,000	153,957,000	50	1,443,000	14,361,000
1922.....	297	9,787,000	86,478,000	41	2,423,000	23,047,000
1923.....	524	15,098,000	137,473,000	23	831,000	6,606,000
1924.....	617	18,053,000	138,869,000	74	1,955,000	15,272,000
1925.....	456	14,521,000	105,636,000	48	1,194,000	9,839,000
1926.....	796	24,235,000	203,676,000	135	4,424,000	52,431,000
1927.....	538	16,729,000	127,555,000	84	3,061,000	27,418,000
1928.....	418	14,540,000	96,402,000	34	1,215,000	9,117,000
1929.....	561	25,129,000	177,397,000	53	2,767,000	23,556,000
1930.....	1,158	61,233,000	484,275,000	140	6,352,000	58,061,000
<i>Total.....</i>	<i>5,806</i>	<i>216,758,000</i>	<i>1,711,718,000</i>	<i>682</i>	<i>25,665,000</i>	<i>240,608,000</i>

Source: *Annual Reports of the Federal Reserve Board, 1930.*

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TABLE 31

BANK SUSPENSIONS: NUMBER, CLASSIFIED ACCORDING TO CAPITAL STOCK,
1921-1930

ALL BANKS											
Banks having capital stock of	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total
Less than \$25,000....	194	117	295	319	234	384	247	191	223	466	2,670
\$25,000	104	85	151	191	135	230	165	106	143	296	1,606
\$25,100 to \$49,000 ..	31	39	49	55	46	100	60	38	67	140	625
\$50,000 to \$99,000....	78	53	91	130	133	164	122	94	120	221	1,206
\$100,000 to \$199,000	47	24	32	61	43	46	47	46	58	131	535
\$200,000 to \$999,000	12	15	16	15	18	16	13	11	19	70	205
\$1,000,000 and over..	14	.....	.....	.....	.....	.....	.....	.....	25	11	20
Not available.....	31	21	14	5	3	16	8	5	7	10	120
Total	501	354	648	776	612	956	662	491	642	1,345	6,987
NATIONAL BANKS											
\$25,000	23	14	41	44	41	46	31	15	15	56	326
\$25,100 to \$49,000 ..	2	5	10	9	5	20	6	3	6	15	81
\$50,000 to \$99,000....	14	13	26	42	46	45	40	24	26	39	315
\$100,000 to \$199,000	9	7	9	19	15	12	12	10	13	30	136
\$200,000 to \$999,000	3	6	4	8	11	2	2	5	3	19	63
\$1,000,000 and over..	.....	.....	.....	.....	.....	.....	.....	.....	1	4	3
Total	51	45	90	122	118	125	91	57	64	161	924
STATE MEMBER BANKS											
Less than \$25,000....	.....	.....	.....	.....	1	2	.....	.....	.....	.....	3
\$25,000	2	4	11	9	11	5	13	3	4	8	70
\$25,100 to \$49,000...	3	5	2	4	1	7	4	2	2	2	32
\$50,000 to \$99,000....	7	1	14	10	8	12	4	6	5	5	72
\$100,000 to \$199,000	5	1	4	12	5	7	8	5	5	4	56
\$200,000 to \$999,000	1	1	3	2	2	2	4	.....	.....	3	18
\$1,000,000 and over..	1	.....	.....	.....	.....	.....	.....	.....	1	4	6
Total	19	12	34	37	28	35	33	16	17	26	257
NONMEMBER BANKS											
Less than \$25,000....	194	117	295	319	233	382	247	191	223	466	2,667
\$25,000	79	67	99	138	83	179	121	88	124	232	1,210
\$25,100 to \$49,000...	25	29	37	42	40	73	50	33	59	123	512
\$50,000 to \$99,000....	57	39	51	78	77	107	78	64	89	177	819
\$100,000 to \$199,000	33	16	19	30	23	27	27	31	40	97	343
\$200,000 to \$999,000	8	8	9	5	5	12	7	6	16	48	124
\$1,000,000 and over..	13	.....	.....	.....	.....	.....	.....	.....	23	5	11
Not available.....	31	21	14	5	3	16	8	5	7	10	120
Total	431	297	524	617	466	796	538	418	561	1,158	5,806

¹ Includes 1 bank with capital of \$1,309,000.

² Includes 1 bank with capital of \$1,225,000.

³ Includes 1 bank each with capital of \$1,218,000, \$1,750,000, \$2,500,000, \$4,000,000, \$4,877,000, and \$25,250,000.

⁴ Includes 1 bank with capital of \$4,000,000.

⁵ Includes 1 bank with capital of \$1,750,000 and 1 with \$25,250,000.

⁶ Includes 1 bank each with capital of \$1,218,000, \$2,500,000, and \$4,877,000.

used in the tables will throw some light on the situation that does not appear from a mere recital of totals.

Analysis of data.—An examination of the data contained in the tables discloses certain interesting facts. In the first place, it is clear that, while member banks of the Federal Reserve System were not free from failures, by far the heav-

iest mortality occurred among banks of the nonmember group, the suspensions among this class of banks during the decade accounting for over 80 per cent of the total. The second fact of importance is that the great bulk of the failures occurred among banks with small capital stock. Of the total number of failures, more than 60 per cent took place among banks having a capital of \$25,000 or less, while the suspensions of banks having a capital of less than \$100,000 comprised nearly 90 per cent of the total. In the third place, 59 per cent of the banks that failed were located in places of less than 1000 population, while less than 6 per cent were situated in cities of 25,000 and over.

TABLE 32
BANK SUSPENSIONS, BY SIZE OF TOWN OR CITY, 1921-1930

Places with population of	Number of suspensions										
	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total
Less than 500.....	181	120	331	335	226	372	266	207	240	442	2,720
500 to 1,000.....	99	75	104	158	130	204	142	93	128	278	1,411
1,000 to 1,500.....	47	23	58	71	67	115	61	48	77	128	695
1,500 to 2,500.....	39	44	55	75	56	88	65	52	63	137	674
2,500 to 5,000.....	33	30	35	55	60	79	53	33	35	119	532
5,000 to 10,000.....	32	18	24	28	32	30	22	18	35	60	299
10,000 to 25,000.....	21	12	14	22	18	22	30	17	24	57	237
25,000 and over.....	49	32	27	32	23	46	23	23	40	124	419
Total.....	501	354	648	776	612	956	662	491	642	1,345	6,987

Source: *Annual Report of the Federal Reserve Board, 1930.*

It is clear from these facts that the epidemic of failures was confined largely to small banks operating in small towns or cities. Moreover, many of the suspensions took place in particular sections of the country. The sectional distribution of failures after 1925 is shown in Table 33, together with the number of banks in active operation in 1926. Taking the five and one-half years as a whole, 59 per cent of total failures occurred in the West North Central and South Atlantic states, while these same groups of states accounted for 70 per cent of total failures in the four years prior to 1930. These sections include the great staple crop states that were hardest hit by the agricultural depression, which had been in evidence since the crisis of 1920. In addition, the two sections in question had a population in 1926 of about 25 per cent of the total population of the United States, but operated 38 per cent of all of the banks in the country.

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The West North Central states alone possessed 27.5 per cent of the total number of banks, while their population aggregated less than 9 per cent of total population.

TABLE 33
BANK SUSPENSIONS BY SECTIONS, 1926-1930

Section	1926	1927	1928	1929	1930	1931 Jan.-June	Active Banks June 1926
United States. . . .	956	662	491	642	1,345	684	28,081
New England. . . .	none	1	1	none	13	1	1,104
Middle Atlantic. . .	6	10	4	11	30	52	3,343
East North Central	67	91	59	84	286	232	5,819
West North Central	523	308	249	298	413	181	7,737
South Atlantic. . . .	206	93	105	156	222	75	2,992
East South Central	25	30	15	38	143	74	1,857
West South Central	86	88	44	41	201	40	2,938
Mountain.	31	19	9	12	25	14	1,034
Pacific.	12	22	5	12	12	15	1,257

Source: Annual Reports of the Federal Reserve Board 1926-1930. *Federal Reserve Bulletin*, July 1931.

It accordingly seems reasonable to conclude that the chief causes of the series of bank failures extending over the period of a decade were the depression in certain branches of agriculture combined with a low value of farm property and an overbanked condition in the distress areas. The excessive number of banks, made possible by lax banking laws and insufficient capital requirements, in turn engendered inefficient and unsound management on the part of many country bankers.

THE BANKING CRISIS

Difficulties preceding the crisis.—Although the bank failures preceding the great depression were numerous, they were, as has been indicated, largely among small banks and, in a considerable measure, among banks located in certain sections of the country. For the most part, the larger city banks were not affected prior to the end of 1930. The deepening depression, however, led to difficulties among city institutions, many of which had overextended their credit secured by real estate during the real estate boom of the twenties. These difficulties, which led to city bank failures and

heavy deposit withdrawals, were greatly increased by the departure of England from the gold standard in September 1931. The United States lost some \$700,000,000 in gold in the ensuing six weeks and, domestically, a sharp increase in the withdrawal of deposits and hoarding of currency by the public put a heavy added strain on an already weakened banking position. In October 1931, there was recorded the largest number of bank failures for any single month in the history of the country. The situation was becoming desperate and pointed to the necessity for emergency action.

The National Credit Corporation.—The first emergency measure was the organization of the National Credit Corporation in October 1931. Established by the banks at the suggestion of President Hoover as an instrument of self-help in the emergency, the corporation was organized with a nominal capital of 12 shares of \$100 par value, one share to be subscribed by each of 12 directors, one from each Federal Reserve district. The Corporation was authorized to issue debentures up to \$1,000,000,000, the banks of the country being requested to subscribe to such debentures at par in the amount of 2 per cent of their net demand and time deposits. The funds obtained by the sale of debentures by the Corporation were to be used in making loans to banks in difficulties. The banks were to form groups or associations in each Federal Reserve district, each group to establish a loan committee. A bank in need of funds was to apply for a loan to its group committee, which would pass on the collateral and, if it approved the loan, recommend its extension to the Corporation. The banks of a group were to be jointly liable for money borrowed by a member, and the amount borrowed, in general, was restricted to the total debenture subscriptions of the banks in the group.²

Whatever merit the National Credit Corporation plan might be expected to possess lay in the favorable psychological influence it might exert. The red tape involved in obtaining a loan, the limitation of loans to the debenture subscriptions of the applying group, and the requirement that all of the members of a group be jointly liable for loans extended were sufficient to prevent the Corporation from

² For further details, see *Federal Reserve Bulletin*, October 1931, pp. 555-57.

furnishing essential assistance to distressed banks. The amount of accommodation actually extended by the Corporation was some \$135,000,000, a negligible quantity in the circumstances.³ It seems probable, however, that the sharp decrease in bank failures in November 1931 may be attributed, in part at least, to the favorable reception accorded to the Corporation at the outset. The resumption of a heavy mortality rate in December, on the other hand, indicates that the success of the Corporation was short-lived.

The Reconstruction Finance Corporation.—The failure of the National Credit Corporation to stem the tide of bank failures made some more effective action essential. Such action was taken early in 1932 with the passage of the Reconstruction Finance Corporation Act on January 22nd. This act provided for the organization of a corporation, to be known as the Reconstruction Finance Corporation (hereafter termed the R.F.C.), with a capital of \$500,000,000 to be subscribed by the United States Treasury. The R.F.C. was also authorized to issue debentures to the amount of three times its capital, thus giving it total possible funds of \$2,000,000,000 with which to work. The debentures of the R.F.C. might be purchased by the Treasury (and actually were so purchased) or sold to the public.

As to the scope of its functions, by Sec. 5 of the Act, the R.F.C. was "Authorized and empowered to make loans, upon such terms and conditions not inconsistent with this act as it may determine, to any bank, savings bank, trust company, building and loan association, insurance company, mortgage loan company, credit union, Federal land bank, joint stock land bank, Federal intermediate credit bank, agricultural credit corporation, livestock credit corporation, organized under the laws of any State or of the United States, including loans secured by the assets of any bank that is closed, or in process of liquidation to aid in the reorganization or liquidation of such banks. . . *Provided*, That not more than \$200,000,000 shall be used for the relief of banks that are closed or in the process of liquidation." Loans were permitted to run for three years, extended to five if necessary, and were to be secured adequately by collateral offered by the borrow-

³ See Bogen and Nadler, *The Banking Crisis*, p. 104.

TABLE 34

REPORT OF THE RECONSTRUCTION FINANCE CORPORATION
AGGREGATE LOANS TO EACH CLASS OF BORROWER, FEBRUARY 2 TO DECEMBER 31, 1932, INCLUSIVE

Class	Authorized ¹ Feb. 2 to Dec. 31	Advanced Feb. 2 to Dec. 31	Repaid Feb. 2 to Dec. 31	Outstanding Dec. 31, 1932
Under sec. 5 of the Reconstruction Finance Corporation act:				
Banks and trust companies.....	\$949,858,000.00	\$850,882,060.02	\$256,284,553.21	\$594,597,706.01
Building and loan associations.....	99,780,044.75	93,033,114.67	9,683,770.91	84,249,337.76
Insurance companies.....	83,048,031.66	68,037,618.02	5,886,738.52	21,448,886.46
Mortgage loan companies.....	93,761,002.61	88,332,029.30	11,990,207.36	77,041,813.03
Credit unions.....	472,416.00	440,008.00	5,838.00	431,266.00
Federal land banks.....	20,000,000.00	18,600,000.00	.....	18,600,000.00
Joint-stock land banks.....	6,207,000.00	2,427,845.62	.....	2,405,301.30
Agricultural credit corporations.....	3,650,850.08	3,456,617.33	1,082,310.40	2,374,316.93
Regional agricultural credit corporations.....	7,285,972.50	5,372,662.00	.....	5,371,407.57
Livestock credit corporations.....	13,145,662.85	11,810,403.18	4,066,791.16	7,743,612.45
Railroads (including receivers).....	337,435,003.00	284,311,271.48	11,839,662.71	272,471,708.77
Total, sec. 5 of the Reconstruction Finance Corporation act.....	1,623,704,844.44	1,427,663,122.64	299,007,777.52	1,127,695,345.12
Under the emergency relief and construction act of 1932:				
Self-liquidating projects under sec. 201 (a), Title II.....	\$146,572,534.24	\$15,737,000.00	.....	\$15,737,000.00
Financing of agricultural commodities and livestock, sec. 201 (d), Title II.....	54,775,020.67	1,439,074.09	115,456.95	1,324,517.14
Amounts made available for relief and work relief under sec. 1, Title I.....	112,614,673.22	79,067,042.09	.....	79,067,042.09
Total, emergency relief and construction act of 1932.....	313,962,228.13	97,444,016.18	115,456.95	97,228,550.23
Grand total.....	\$1,937,667,072.57	\$1,524,747,138.82	300,023,234.47	\$1,224,723,904.35

¹ The corporation had outstanding on Dec. 31, 1932, agreements to make loans (not included in the above figures) upon the performance of specified conditions, as follows: Banks and trust companies, \$89,806.20.

² Loans to banks and trust companies include loans to aid in reorganization or liquidation of closed banks as follows: \$56,113,587.05 during the period from February 2 to December 31, 1932, inclusive.

³ Includes authorization of two loans, aggregating \$241,404.37, temporarily suspended pending further consideration.

⁴ Includes loans authorized which were subsequently canceled or withdrawn, aggregating \$69,727,054.35, as follows: Banks and trust companies, \$52,905,684.39; building and loan associations, \$3,413,537.31; insurance companies, \$3,122,833.44; mortgage loan companies, \$2,446,104.40; credit unions, \$37,348; Federal land banks, \$5,500,000; joint-stock land banks, \$319,054.68; agricultural credit corporations, \$12,875.80; livestock credit corporations, \$1,178,704.10; railroads (including receivers), \$264,740; self-liquidating projects, \$190,000; and financing of agricultural commodities and livestock \$310,112.94.

Source of data: *Federal Reserve Bulletin*, February 1933, p. 66

ing institution. Provision was also made for direct loans to farmers and loans to railroads, with which we are not here concerned. No loans might be made to new enterprises or for new projects. The R.F.C. was granted a corporate existence of ten years.

The R.F.C. began operations on February 2, 1932; results were visible almost immediately. The number of bank failures decreased in March 1932 to the lowest figure since October 1929. Some increase occurred in the two months following, but both the number and deposits of failed banks remained relatively small until June. In that month, the refusal to grant loans to certain banks in the neighborhood of Chicago brought on a series of failures in that region and again aroused the distrust of bank depositors in certain sections of the country. The number of suspensions continued large in July, but a temporary revival in markets and prices in August brought an increase in confidence that reduced failures to moderate proportions until December, when the number again rose abruptly.

The extent to which the R.F.C. assisted banks and other financial institutions during 1932 is shown in the accompanying table. Although it is possible that a more liberal lending policy on certain occasions might have lessened the number of bank failures, there is no doubt that the situation would have been worse than it was had it not been for the operations of the R.F.C. The aid given by the R.F.C. would have been much more effective, on the other hand, had the publication of the names of institutions soliciting loans and the amounts loaned or applied for not been insisted upon by the Clerk of the House in the summer of 1932.

Other legislation.—Certain other enactments in the nature of emergency legislation were incorporated in the statutes in the course of the year 1932. These need no detailed analysis at this point. The Glass-Steagall Bill, which became law on February 27, 1932, has already been considered, while the Home Loan Bank Act of July 22, 1932, is treated later in Chapter 37. The latter measure contained an inflationary rider permitting national banks, for a three-year period, to issue notes secured by United States bonds bearing not more than $3\frac{3}{8}$ per cent interest. Under this measure, a substantial

amount of national bank notes were issued in the course of the year without any startling effects. The Emergency Relief and Reconstruction Act of July 21, 1932, broadened the powers and lending functions of the R.F.C., but did not materially change the relation of this corporation to banks and trust companies. One section of this act granted the Federal Reserve Board the power, in exigent and unusual circumstances, to permit Federal Reserve banks to extend loans directly to business enterprises when the latter were unable to obtain accommodation at their member banks, but loans of only \$859,000 were granted under this provision during the rest of the year.⁴ In short, the one major enactment designed to right the banking situation, so far as bank failures were concerned, was the Reconstruction Finance Corporation Act. That this failed in its main purpose will be shown in the following paragraphs.

The banking crisis of 1933.—The year 1933 opened with 237 bank suspensions in January. Confidence was badly disturbed in different sections of the country, and it had been found necessary for various political authorities to declare local banking moratoria in certain regions to prevent the complete collapse of banking facilities. The seriousness of the situation was not generally recognized, however, until February 14th, when Governor William A. Comstock declared a bank holiday for a week for all of the banks in the State of Michigan, as a result of difficulties in the Detroit area. Nothing short of a tremendous cash loan would have prevented the failure of one of the large Detroit banks with disastrous results. The necessary loan could not be arranged, and Governor Comstock's proclamation followed.

The closing of the Michigan banks not only alarmed frightened depositors in other sections of the country, but set up a drain of cash from other regions into the Michigan area. Large corporations operating in Detroit withdrew deposits in cash from neighboring states and from New York in order to meet payrolls and other needs usually satisfied by the local banks. Banks in neighboring sections in turn withdrew balances from New York in order to obtain cash to meet the demands of their own creditors. Under such

⁴ *Annual Report of the Federal Reserve Board, 1932, p. 20.*

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circumstances, restriction of payments by banks in other states was inevitable. On February 23rd, Indiana joined Michigan in limiting banking activities to a nominal basis. Maryland followed on the 25th, Arkansas on the 27th, and Ohio on the 28th. From this point on, state banking moratoria increased rapidly in number, as shown in the accompanying list, until the morning of March 4th, when practically all of the remaining banks of the country suspended operations.

February

- 14.—Michigan.
- 23.—Indiana.
- 25.—Maryland.
- 27.—Arkansas
- 28.—Ohio.

March

- 1.—Alabama, Kentucky, Nevada, and Tennessee.
- 2.—Arizona, California, Louisiana, Mississippi, Oklahoma, and Oregon.
- 3.—Georgia, Idaho, New Mexico, Texas, Utah, Washington, and Wisconsin.
- 4.—Colorado, Connecticut, Delaware, Florida, Illinois, Iowa, Kansas, Maine, Massachusetts, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, and Wyoming.

As was natural, prior to the complete suspension of banking activities on March 4th, the strain on the New York banks, including the Federal Reserve Bank of New York, was intense. "In the period of a little over three weeks between February 8 and March 3, the withdrawals of currency by member banks from the Reserve Banks were over \$1,700,000,000, the greater part of which occurred in the last week of the period. Out-of-town banks withdrew nearly \$800,000,000 from their balances with New York City banks in order to meet the demands on them, and banks throughout the country found it necessary to draw more and more heavily upon the Federal Reserve Banks for additional credit.

"The reserve position of the Federal Reserve Banks was affected not only by the loss of reserves, but also by a large increase in reserve requirements against Federal Reserve notes outstanding. As a result the excess gold reserves of

the Federal Reserve Banks declined to a little over \$400,000,000, as compared with a high point of nearly \$1,500,000,000 in January. The burden fell most heavily on the New York Reserve Bank which was called upon to meet not alone the demands from its own district but large demands from other districts as well. To maintain its reserve position this bank found it necessary to rediscount a substantial amount of its paper with other Reserve Banks and sell them in addition some of its Government securities.”⁵

The President's Proclamation.—The closing of the New York banks and, with them, of banks that had remained open in other sections of the country, occurred on the day of President Roosevelt's inauguration. On the morning of March 6, 1933, the President proclaimed a nationwide bank moratorium from March 6th to March 9th, inclusive, pending the convening of Congress in special session on the latter date. Meanwhile, the President and his aides undertook the task of drafting an emergency bill that would be presented to Congress at the earliest possible moment. The hoarding and export of gold were prohibited by the proclamation as well as the performance of any except a few absolutely essential banking functions.

The Emergency Banking Act.—When Congress convened on March 9th, the administration had its emergency banking bill ready for submission. It was the first measure introduced into Congress and was passed in the record time of seven and one-half hours. It contained four fairly distinct sets of provisions. First, after confirming the previous, and any subsequent, proclamations of the President concerning the hoarding and export of gold and the reopening of the banks, the act provided that in a period of emergency the President should have the power to prohibit the exportation, earmarking, or hoarding of gold, and to require holders of gold to turn this in at the Treasury in exchange for other moneys. It also gave the President the power to prevent member banks from carrying on any banking business, other than such as might be permitted by the

⁵ *Monthly Review*, Federal Reserve Bank of New York, April 1, 1933, p. 26. The list of dates of bank holidays and restrictions given above is taken from this same issue, p. 25.

Treasury, for the period of the emergency. Severe penalties for the violation of these provisions were attached.

Second, the law provided that, in order to conserve the assets of national banks in unsound or questionable condition for the benefit of depositors and other creditors, the Comptroller of the Currency might, at his discretion, appoint a conservator for any such bank, the conservator to have the legal status of a receiver and to take complete charge of the affairs of the bank. A bank for which a conservator had been appointed might receive new deposits that were to be invested in United States securities, held in cash, or deposited with the Federal Reserve bank. These deposits were to be thus strictly segregated and withdrawable in full on demand. Old deposits, however, were to be subject to such restrictions and limitations on withdrawals as might be determined by the Comptroller of the Currency.

If a bank in the hands of a conservator could be put in sound condition to resume full banking operations, the law provided for the withdrawal of the conservator and the return of the bank to its old management. It was also provided that upon the receipt of written assent of 75 per cent of the depositors, or two-thirds of the stockholders, or both, a reorganization of the bank might be undertaken, the reorganized institution to operate on an unrestricted basis. On the other hand, if the affairs of the bank were hopeless, it was to be liquidated.

Third, it was provided that national banking associations might issue 6 per cent cumulative preferred stock, with such voting powers and retirement conditions as might be provided in the bank's articles of association with the approval of the Comptroller of the Currency. Such stock was to have a prior lien to the common stock on assets and earnings and was to carry no added liability. If, in the opinion of the Secretary of the Treasury, a national banking association or state bank or trust company was in need of added capital in connection with its reorganization or otherwise, the Secretary might request the R.F.C. to subscribe to preferred stock in such bank. The powers of the R.F.C. were broadened to permit such subscriptions, and the R.F.C. was permitted, with the approval of the Secretary of the Treasury, to sell

this stock later in the open market if conditions should permit.

Fourth, the Federal Reserve Act was amended to permit the Federal Reserve banks to issue Federal Reserve bank notes secured by obligations of the United States up to 100 per cent of the security, or by notes, drafts, bills of exchange or bankers' acceptances acquired by the Reserve banks by discount or purchase up to 90 per cent of the security. No reserve was required against such issues. Title IV of the act also permitted the Reserve banks, until March 3, 1934, to discount member bank notes secured by any adequate collateral normally not eligible, at a rate 1 per cent above the regular discount rate of the Reserve bank. The Reserve banks were also permitted to make advances directly to individual business enterprises on the security of United States obligations.⁶

The reopening of the banks.—Armed with the powers conferred by the Emergency Banking Act, the administration made prompt plans for reopening the banks as rapidly as possible. The bank holiday was extended for a few days to permit these plans to be put into effect. Only sound banks were to be permitted to reopen on an unrestricted basis. Sound member banks were required to obtain licenses from the Secretary of the Treasury through their Federal Reserve banks, while nonmember state banks received their licenses from the appropriate state authority. Banks not receiving licenses were put into the hands of conservators, or operated on a restricted basis in the case of some of the nonmember banks. A bank, to be rated sound, apparently was required to possess rediscountable assets (i.e., sound assets) in an amount equal to its deposits. Thus, if, upon reopening, depositors demanded their money, these assets could be rediscounted at the Reserve banks to obtain Federal Reserve bank notes, and the depositors could be paid in full. The President, by proclamation, also required the holders of gold to turn it in at the banks in exchange for other moneys, thus strengthening the gold reserves of the Federal Reserve banks.

Sound banks throughout the country were permitted to

⁶ An amendment to the Emergency Banking Act, dated March 24, 1933, allowed the Reserve banks to make direct loans to nonmember banks and trust companies during the emergency.

open in the following order: on Monday, March 13, 1933, all sound banks in the twelve Federal Reserve cities were reopened; on Tuesday, banks in about 250 clearing house cities were reopened; and on Wednesday, all of the remaining sound banks were reopened. Thus, by March 15, 1933, banks controlling about 90 per cent of the banking resources of the country were again doing business on an unrestricted basis. Depositors displayed no distrust in the reopened banks, deposits exceeding withdrawals in all sections, so that small use was made of the new Federal Reserve bank notes authorized by the emergency act. The rapid improvement in the banking situation is evidenced by the following quotation from the *Monthly Review* of the Federal Reserve Bank of New York:⁷

The total return flow of currency of all kinds in the three weeks ended March 29 was \$1,185,000,000. A large part of the proceeds of this currency was used to retired Federal Reserve credit, and the indebtedness of member banks at all Federal Reserve Banks declined from more than \$1,400,000,000 just before the middle of March to \$545,000,000 on March 29. A moderate amount of Federal Reserve credit in other forms was also retired, and in addition the total reserves of member banks were increased by \$211,000,000. In New York City the indebtedness of the principal banks at the Reserve Bank was reduced from well over \$600,000,000 before the middle of March to \$84,000,000 on March 29, and on that date some of the New York City banks again held moderate amounts of excess reserves.

Despite the admirable courage and promptitude with which the administration met the emergency, some sections of the country suffered severely as a result of the emergency measures. Certain smaller towns and cities were left without any banking accommodation whatever for long after the termination of the general moratorium. At the end of May 1933, as among member banks only, 1163 banks with deposits of \$1,856,427,000 were still not licensed to do business on an unrestricted basis,⁸ while probably an equal amount of deposits was immobilized in unlicensed nonmember banks. Nevertheless, the opportunity the emergency offered for far-reaching fundamental reform in the banking system would, if grasped, have proved of sufficient importance to the future

⁷ *Op. cit.*, p. 26.

⁸ *Federal Reserve Bulletin*, June 1933, p. 341.

welfare of the country to offset the inconvenience and suffering that accompanied the crisis.

Bank failures, 1931-1933.—The course of bank failures by months during 1931-1932, just prior to the culmination of the banking crisis, is shown in Table 35. It will be observed

TABLE 35
BANK SUSPENSIONS: 1931-1932

Month	Number			Deposits (in thousands of dollars)		
	Total	Member	Non-mem.	Total	Member	Non-mem.
1931						
January.....	202	26	175	76,553	22,184	54,369
February.....	77	20	57	34,616	13,723	20,893
March.....	86	10	76	34,320	11,007	23,313
April.....	64	20	44	41,683	21,762	19,921
May.....	91	26	65	43,210	17,375	25,835
June.....	167	36	131	190,480	70,802	119,678
July.....	93	18	75	40,745	8,850	31,895
August.....	158	41	117	180,028	81,285	98,743
September.....	305	62	243	233,505	109,718	123,787
October.....	522	125	397	471,380	228,347	243,033
November.....	175	43	132	67,039	32,255	35,684
December.....	358	81	277	277,051	113,216	163,835
1932						
January.....	342	87	255	218,867	74,355	144,512
February.....	121	30	91	57,266	25,554	31,712
March.....	46	7	39	14,760	4,484	10,276
April.....	74	11	63	31,613	14,521	17,092
May.....	82	20	62	34,370	7,500	26,870
June.....	151	48	103	132,661	50,144	82,517
July.....	132	24	108	48,743	19,101	29,252
August.....	85	19	66	29,513	11,873	17,640
September.....	67	16	51	13,508	4,705	8,803
October.....	102	20	82	20,092	6,209	13,883
November.....	93	25	68	43,319	26,582	13,737
December.....	161	24	137	70,914	20,885	50,029
Source of data: Annual Reports of the Federal Reserve Board.						

that bank suspensions in 1931 established a high record of 2298, with deposits of \$1,691,510,000. In 1932 the number of suspensions, although smaller than in the previous year, still totaled 1456, with deposits of \$715,626,000. The heavy failures near the end of 1931 are probably accounted for by England's departure from the gold standard in September, which led to a heavy drain of gold from the United States and a large increase in hoarding within the country. The marked improvement early in 1932 is doubtless to be ex-

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TABLE 36. BANKS SUSPENDED AND NONLICENSED BANKS IN LIQUIDATION OR RECEIVERSHIP JAN. 1 TO DEC. 31, 1933, AND NONLICENSED BANKS ON SELECTED DATES IN 1933

Period or date	Number of banks				Deposits ¹ (in thousands of dollars)			
	Total	National	State member	Non-member	Total	National	State member	Non-member
Banks suspended, Jan. 1 to March 15								
January.....	242	44	15	183	134,202	55,938	14,304	63,870
February.....	154	20	7	127	64,703	15,864	7,239	41,600
March 1 to 4.....	21	—	—	21	3,288	—	—	3,288
March 5 to 15.....	42	2	1	39	15,542	1,381	109	14,052
Total.....	462	66	23	373	217,735	73,183	21,742	122,810
Licensed banks suspended,² March 16 to Dec. 31								
March 16 to 31.....	30	—	—	30	25,144	—	—	25,144
April.....	36	2	4	30	20,749	4,457	1,600	14,692
May.....	18	1	—	17	34,047	799	—	33,248
June.....	15	1	—	14	24,098	7,911	—	17,087
July.....	13	3	—	10	11,032	3,300	—	7,732
August.....	18	—	—	18	14,301	—	—	14,301
September.....	15	1	1	13	7,736	879	1,860	4,997
October.....	22	1	—	21	5,023	144	—	5,779
November.....	18	—	—	18	4,606	—	—	4,606
December.....	27	—	1	26	3,912	—	67	3,845
Total.....	221	9	6	206	152,538	17,490	3,527	131,521
Nonlicensed banks placed in liquidation or receivership,³ Mar. 16 to Dec. 31								
March 16 to 31.....	95	9	4	82	22,687	2,650	2,704	17,333
April.....	119	7	5	107	63,798	8,093	4,568	51,137
May.....	82	14	8	60	677,228	507,715	132,331	37,182
June.....	77	13	7	57	427,970	24,286	385,674	18,010
July.....	84	26	4	54	80,471	59,182	347	20,942
August.....	114	51	5	58	166,147	72,283	54,975	38,889
September.....	120	66	4	50	132,094	66,024	26,889	39,181
October.....	156	112	4	40	124,014	91,535	17,420	15,059
November.....	102	68	2	32	77,122	67,204	984	8,934
December.....	145	98	2	45	114,169	67,704	21,089	25,376
Total.....	1,100	464	45	591	1,894,700	966,676	646,990	281,034
Nonlicensed banks⁴ (other than mutual savings)								
March 15.....	—	1,400	221	—	2,163,505	924,177	—	—
April 12.....	4,215	1,108	148	2,959	3,081,232	1,818,541	841,382	1,321,309
June 30.....	3,078	985	110	1,983	2,320,090	1,028,347	237,668	1,063,684
October 25.....	2,301	683	76	1,542	1,504,133	610,463	136,405	817,265
December 30.....	1,905	452	60	1,393	1,202,420	434,978	92,876	674,566

¹ Deposits of national banks suspended or placed in liquidation or receivership are as of the date of suspension or conservatorship, while those of nonlicensed national banks shown in the fourth section of the table are as of the nearest call date; deposits of State bank members are as of the nearest call date; and deposits of nonmember banks are as of Dec. 31, 1932, or as of the nearest available call date prior thereto.

² Includes banks placed in liquidation or receivership and banks placed on a restricted basis; excludes banks reported as having been absorbed or succeeded by, or consolidated or combined with, other banks.

³ Includes nonlicensed banks absorbed or succeeded by other banks.

⁴ Includes 1 bank in April with deposits of \$4,222,000, 1 in June with deposits of \$23,453,000, 2 in July with deposits of \$173,000, 1 in August with deposits of \$49,000,000, 1 in September with deposits of \$3,989,000, and 1 in November with deposits of \$811,000, which did not receive licenses following the banking holiday and withdrew from the Federal Reserve System before being placed in liquidation.

⁵ Banks operating on a restricted basis or not in operation but which have not been placed in liquidation or receivership.

plained by the establishment of the Reconstruction Finance Corporation late in January, while the subsequent deterioration in the banking situation was due, in part at least, to the publication of R.F.C. loans and applications later in the year.

The increase in failures late in 1932 was carried over into the opening months of 1933, as shown by the accompanying tabulation (Table 36). A total of 462 banks, with deposits of \$217,735,000, failed between the first of the year and March 15th, the latter being the date on which the last of the licensed banks reopened after their closure during the banking crisis. Although banks controlling a large proportion of the banking resources of the country were operating on an unrestricted basis after March 15, 1933, suspensions continued throughout the remainder of the year. As seen from the table, 221 licensed banks with deposits of slightly more than \$150,000,000 and 1100 nonlicensed banks with deposits of nearly two billion dollars were suspended or placed in liquidation in the last three-quarters of the year.

DEPOSIT INSURANCE

An outgrowth of bank failures.—Although various plans for the guaranty of bank deposits had been tried in a number of different states from time to time and had proven uniformly unsuccessful, the large number of bank failures from 1921–1930 and the still larger number during the depression gave rise to a demand for some sort of national legislation along these lines as a method of preventing heavy losses to depositors.

In the early drafts of the Glass bill (which later became the Banking Act of 1933) an attempt to assist depositors of closed banks was made by providing for a Federal Liquidating Corporation. The purpose of this Corporation was to have been to appraise the assets of failed banks and, on the basis of this estimate, to pay to depositors at once a large proportion of what they might expect to get from the final liquidation of the failed bank's assets. The depositor would thus get no more than otherwise, but would have the advantage of getting a large part of it without delay.

This provision did not go sufficiently far to suit Representative Steagall, Chairman of the House Banking and

Currency Committee, and, upon his insistence, it was changed in the final act to a plan for what was termed deposit insurance.

Provisions of the Banking Act of 1933.—This act contained the original provisions for the organization and operation of a Federal Deposit Insurance Corporation. The management of the Corporation was vested in three directors, the Comptroller of the Currency and two directors appointed by the President for terms of six years each. The capital stock of the Corporation was to be of two kinds, Class A and Class B, of \$100 par value. Class A stock was to be subscribed to by banks participating in the insurance plan in an amount equal to $\frac{1}{2}$ of 1 per cent of their total deposits, one-half of such subscription to be paid in full and one-half to be subject to call. Class A stock was entitled to cumulative dividends of 6 per cent or 30 per cent of the net earnings in any one year, whichever was greater. No voting power was carried by this class of stock.

The Class B stock of the Corporation was to be subscribed to by the Federal Reserve banks in an amount equal to one-half of their surplus on January 1, 1933, one-half of this subscription to be paid at once, the remainder being subject to call. Class B stock was entitled to no dividends.

The law also provided for subscription by the Treasury to stock in the Corporation in the amount of \$150,000,000, subject to call by the directors at their discretion. On stock actually paid for by the Treasury, dividends were to be paid in the same amount and manner as on Class A stock.

In addition to funds obtained through subscriptions to stock, the Corporation was empowered to issue and sell notes, debentures, bonds or short-term bills in an amount not greater than three times its capital. Funds of the Corporation not otherwise employed might be invested only in obligations of the United States, although for temporary periods funds might be deposited in the Federal Reserve banks or with the Treasury. The Corporation might be designated as a depository of public moneys, other than customs receipts, and might be employed as financial agent by the government.

The purpose of the Corporation was to insure the payment of depositors of banks that owned stock in the Corporation

and that became insolvent. Provision was made for the payment in full of individual net deposits in amounts not exceeding \$10,000; 75 per cent of amounts in excess of \$10,000, but not over \$50,000; and 50 per cent of amounts in excess of \$50,000. Different accounts held for the benefit of a single depositor were to be considered as a single deposit for purposes of determining the amount paid to depositors of failed banks.

The procedure of the Corporation, in the event of the failure of a participating bank, was complicated and need merely be sketched in broad outlines. In case of the failure of a national bank, the Comptroller of the Currency was required to appoint the Corporation as receiver. The Corporation was then required to establish a new national bank, without capital stock, to take over the liabilities of the failed institution. Depositors of the insolvent bank might then withdraw their deposits, in the amounts specified in the preceding paragraph, or might leave them on deposit with the new bank. In the latter case, they were to be segregated. The Corporation was to furnish the new bank with the necessary cash to pay depositors. After the new bank had been organized, the Corporation would undertake the liquidation of the assets of the failed bank, reimbursing itself for deposits paid out, and making additional payments on (or giving credits to) the large deposits if the funds obtained from the liquidation were sufficient. The Corporation was authorized to sell stock in the new bank to stockholders of the failed bank or to others, if desirable and possible to do so, whereupon the new bank would become a regularly operating national banking association. If stock had not been sold, or the assets sold to an existing bank, after two years, the new bank was to be voluntarily liquidated.

The procedure was somewhat more complicated with failures of participating state banks, because of state laws regarding receiverships, but in general it followed similar lines, a new national bank being established to take over the liabilities of the insolvent institution.

Participation in the deposit insurance plan was required of all national and state member banks after July 1, 1934, subject to forfeiture of charter or of membership in the Federal

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Reserve system, respectively, for failure to subscribe to stock in the Corporation. Nonmember banks that agreed to submit to examinations and to subscribe to the required amount of stock in the Corporation were to be permitted to participate in the insurance plan until July 1, 1936. Thereafter, nonmember banks might only be insured, after having applied for membership in the Federal Reserve system, during the period in which their application for membership was under review. To cover the period from January 1, 1934, to July 1, 1934, when the Corporation was to begin its regular operations, a temporary deposit insurance fund was provided for. Payments to depositors of failed banks under this fund were limited to \$2500, and subscriptions to the fund were limited to $\frac{1}{2}$ of 1 per cent of insured deposits only.

Amendment of the law.—As the time approached for the permanent deposit insurance provisions of the Banking Act of 1933 to be put into effect, it was felt that an extension of the temporary fund for another year would be desirable. Accordingly, on June 16, 1934, a law to amend the Banking Act of 1933 in this respect was approved by the President. The amendment extended the temporary deposit insurance plan until July 1, 1935, and put off the date at which nonmember banks, in order to participate in the insurance plan, had to join the Federal Reserve System from July 1, 1936, to July 1, 1937.

The amount of insured deposits for each account was increased from \$2500 to \$5000, except for mutual savings banks, which might continue to insure deposits up to \$2500 only if they desired. In order to meet this situation, the F.D.I.C. was authorized to set up on its books a special Fund for Mutuals, to be in effect until July 1, 1935. A number of mutual savings banks dropped out of the temporary fund during 1934, chiefly because of the establishment of a state fund for mutuals in New York State.

Extent of protection.—The extent to which individual depositors were protected by the provisions governing the temporary fund on October 31, 1934, is shown in the accompanying table. It will be seen that more than 98 per cent of all accounts in banks belonging to the fund were fully insured, but that only 44 per cent of total deposits were

TABLE 37. FEDERAL DEPOSIT INSURANCE CORPORATION

NUMBER OF BANKS AND ACCOUNTS AND DEPOSITS IN COMMERCIAL BANKS AND TRUST COMPANIES, BY SIZE OF DEPOSITS: OCT. 1, 1934

Deposits	Insured banks					Noninsured banks ²	
	Number of banks	Accounts		Deposits ¹ (in thousands of dollars)		Number of banks	Deposits (in thousands of dollars)
		Total	Fully insured	Ratio insured to total (per cent)	Total		
\$100,000 and under.....	1,502	616,046	614,460	99.74	99,714	426	24,116
\$100,001 to \$250,000.....	3,580	2,738,463	2,720,389	99.56	609,390	349	55,103
\$250,001 to \$500,000.....	3,109	4,119,429	4,095,878	99.43	1,108,586	169	58,642
\$500,001 to \$750,000.....	1,477	2,095,488	2,074,979	99.32	603,230	54	32,786
\$750,001 to \$1,000,000.....	943	2,596,062	2,577,867	99.26	813,367	27	23,242
\$1,000,001 to \$2,000,000.....	1,630	6,252,654	6,196,088	99.10	2,278,799	34	46,123
\$2,000,001 to \$5,000,000.....	1,060	7,508,918	7,422,184	98.84	3,103,457	16	49,264
\$5,000,001 to \$50,000,000.....	631	12,040,862	11,839,415	98.33	3,078,691	16	223,505
\$50,000,001 and over.....	96	10,856,922	10,548,778	97.16	18,942,185	16	---
Total.....	14,028	49,725,744	48,995,978	98.53	35,075,239	1,091	512,781

¹ Total deposits as reported to the Corporation on Oct. 1, 1934, differ in some respects from gross deposits shown on bank's published statements and cannot be used as a basis for comparison with deposits on previous dates.² Number of noninsured banks as of Dec. 1, 1934, with deposits on June 30, 1934, or nearest available previous call dates, as reflected in the final 1934 edition of Rand McNally Bankers' Directory.Source: *Federal Reserve Bulletin*, March 1935, p. 200.

insured. Moreover, as might be expected, the percentage of deposits insured decreased rapidly in inverse proportion to the size of the bank from almost 92 per cent in banks with \$100,000 or less of deposits to roughly 26 per cent in banks with more than \$50,000,000 of deposits. This relationship became significant in connection with the objections of certain banks to the deposit insurance provisions of the proposed Banking Act of 1935, to be discussed presently.

Criticism of deposit insurance.—After the passage of the Banking Act of 1933, the question of deposit insurance was much in the limelight and the particular provisions of the law aroused much comment, critical and otherwise. Among the critical discussions appearing in print, one of the best was an article by Mr. Guy Emerson in the *Quarterly Journal of Economics*.⁹ Mr. Emerson made two leading criticisms of the law. The first was the act failed to provide for building up a reserve fund through annual assessments on the banks to take care of payments in years when bank failures might be exceptionally heavy. Under the law, banks might be assessed repeatedly in periods of heavy bank failures, but there was no provision for a regular annual premium to be paid in both good years and bad.

The second objection advanced against the law was that assessments were not levied on the insurance principle according to the risk involved. Even though patently unsound banks might be prevented from participating in the insurance at all, there would be bound to be different degrees of soundness in the banks subject to benefits under the law. In the circumstances, it would be only reasonable that the less sound banks be assessed at a higher rate.

In short, the so-called "deposit insurance" of the Banking Act of 1933 was not insurance at all, but merely a guaranty of bank deposits parading under a scientific pseudonym. The question then arises of whether or not real insurance of deposits is possible. In this connection, Messrs. J. H. Taggart and L. D. Jennings, in a study of the question,¹⁰ showed that an annual premium of $\frac{1}{10}$ of 1 per cent of

⁹ *Guaranty of Bank Deposits under the Banking Act of 1933*, February 1934, pp. 229 ff.

¹⁰ "The Insurance of Bank Deposits," *Journal of Political Economy*, August 1934, pp. 508 ff.

deposits paid by national banks since 1863, "would have paid, without allowing for interest, all losses experienced by the system prior to October 1, 1931." This record indicates the possibility of insuring deposits in a well-regulated system on the basis of a very moderate cost.

Everything considered, it would seem clear that insurance of bank deposits is feasible, but that insurance principles must be followed if any such plan is to work out successfully in the long run.

Subsequent experience.—The original provisions of the Banking Act of 1933 concerning deposit insurance were permanently amended by Title I of the Banking Act of 1935. The limit of insurance to \$5000 per depositor, as introduced by the amendment of June 16, 1934, was made permanent, and one of the criticisms voiced by Mr. Emerson in the article referred to above was met by providing that contributions to the insurance fund by insured banks were to be made in the form of an annual premium of $\frac{1}{12}$ of 1 per cent of total average deposits, the premium to be paid in two semi-annual installments.

There is no question but that the change made by the Banking Act of 1935 was an improvement over the original provision in the Banking Act of 1933. It is true that no provision was made for correlating the size of the premium with the risk involved, but the change to an annual premium was probably the most significant single amendment that could have been made. Basing the premium on total deposits instead of insured deposits was unfair to the larger banks, as can be clearly seen from the percentages presented in Table 37, but it was not inimical to the success of the deposit insurance plan.

Since 1935 the Federal Deposit Insurance Corporation has functioned efficiently and successfully. This is indicated by the accompanying statement of the Corporation, which shows that an insurance fund of substantial proportions has been accumulated. In fact, on the recommendation of the F.D.I.C., the \$289 million of stock originally purchased by the Federal Reserve banks and Treasury has been repaid, so that the Corporation now operates entirely on funds from premium payments of insured banks.

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FEDERAL DEPOSIT INSURANCE CORPORATION

STATEMENT OF ASSETS AND LIABILITIES

DECEMBER 31, 1948

ASSETS

CASH ON HAND, IN TRANSIT, AND ON DEPOSIT.....	\$	2,285,883.81	
UNITED STATES GOVERNMENT OBLIGATIONS AT COST (purchased at face value) AND ACCRUED INTEREST RECEIVABLE.....		1,066,056,021.46	\$1,068,341,905.27
MISCELLANEOUS RECEIVABLES.....			4,471.74
ASSETS ACQUIRED THROUGH BANK SUSPENSIONS AND MERGERS (less collections):			
Subrogated claims of depositors against closed insured banks.....	\$	5,414,439.64	
Net balances of depositors in closed insured banks pending settlement or not claimed, to be subrogated when paid—contra.....		27,959.30	
Loans to merging insured banks, to avert deposit insurance losses, and recoverable liquidation expenses.....		4,009,535.29	
Assets purchased from merging insured banks, to avert deposit insurance losses, under agreements to return any excess recovery to selling banks.....		6,982,842.68	
Assets purchased from merging insured banks and receivers of closed insured banks to avert deposit insurance losses.....		58,366.12	
	\$	16,493,143.03	
Less—Reserve for losses.....		12,896,663.08	3,596,479.95 ¹
FURNITURE, FIXTURES, AND EQUIPMENT.....			1.00
DEFERRED CHARGES.....			84,244.10
TOTAL ASSETS.....			<u>\$1,072,027,102.06</u>

¹ Assets acquired through bank suspensions and mergers:

Disbursements.....	\$311,202,682.88
Recoveries.....	283,257,988.49
Remainder.....	\$ 27,944,694.39
Less—Losses incurred and reserves for losses.....	24,348,214.44
Net book values.....	\$ 3,596,479.95

LIABILITIES**CURRENT LIABILITIES:**

Accounts and assessment rebates payable.....	\$	367,325.01	
Earnest money deposits and collections in suspense.		438,398.16	
Net balances of depositors in closed insured banks pending settlement or not claimed—contra		<u>27,959.30</u>	\$ 833,682.47

DEFERRED CREDITS..... 4,530,476.37

SPECIAL RESERVE FOR UNDETERMINED LOSSES
IN PURCHASES OF ASSETS FROM MERGING
INSURED BANKS..... 790,000.00

RESERVE FOR DEPOSIT INSURANCE EXPENSES..... 22,042.31

TOTAL LIABILITIES..... \$ 6,176,201.15

CAPITAL²**SURPLUS:**

Balance June 30, 1948.....	\$	994,812,727.67
Add adjustments applicable to periods prior to July 1, 1948.....		<u>229,196.58</u>
Balance June 30, 1948, as adjusted.....	\$	995,041,924.25

Surplus for the six months ending December 31, 1948:

Additions:

Deposit insurance assessments	\$	59,592,895.64
Interest earned on Government obligations.....		11,644,339.28
Other interest received.....		1,285,517.67
Reimbursement of net cost of administration of the Federal Credit Union Act from May 16, 1942 to July 28, 1948....		1,302,049.37
Other income.....		<u>20,527.52</u>
	\$	<u>73,845,329.48</u>

Deductions:

Deposit insurance losses and expenses.....	\$	373,338.79
Administrative expenses.....		2,654,160.67
Furniture, fixtures, and equipment.....		<u>8,853.36</u>
	\$	<u>3,036,352.82</u>
		70,808,976.66

TOTAL CAPITAL²..... \$1,065,850,900.91

TOTAL LIABILITIES AND CAPITAL²..... \$1,072,027,102.06

² Capital stock issued to the United States in the amount of \$150,000,000.00 and to the Federal Reserve Banks in the amount of \$139,299,556.99, has been retired in accordance with the provisions of Public Laws 363 and 813, approved August 6, 1947 and June 29, 1948, respectively.

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There have been occasional complaints about the severity of the requirements of the F.D.I.C. examining staff. It should be remembered in this connection, however, that the success of the deposit insurance plan rests on keeping the number of bank failures at a minimum. In order to accomplish this end, relatively rigid requirements and standards are essential, especially when the premium paid is not graduated according to the risk involved.

The number of failures of insured banks since the F.D.I.C. began operations has been small, as is shown in Table 38. One suspension occurred in 1944, and since that year, no failures have been reported. The almost perfect record of the last four years (1944-1947) has resulted largely from the high degree of business activity and prosperity during and following World War II. This has been advantageous to the F.D.I.C., since it has permitted the accumulation of a large insurance fund, the outgoing payments having been negligible.

If the F.D.I.C. continues to maintain high standards, there is little reason to think that deposit insurance will not be successful in the United States. A few more years with few or no failures will leave the Corporation with a fund sizeable enough to meet any probable emergency. In fact, with the fund at its present size, it would seem reasonable to amend the law so as to permit premium payments to be based on insured deposits only rather than on total deposits and thus make the premium payments more equitable with regard to the larger banks.

The 100 per cent reserve plan.—In recent years, probably largely as a result of the heavy bank failures preceding the banking crisis of 1933, a number of plans for 100 per cent reserves have been proposed. These plans vary rather widely in detail, but their general purport is the same, namely, the maintenance of reserves of 100 per cent against demand deposits subject to check.

The idea of a 100 per cent reserve is not new. The Bank of Amsterdam and other similar institutions,¹¹ which operated in the fifteenth century, maintained 100 per cent reserves. These banks simply accepted metallic coin by weight, de-

¹¹ Noted in Chapter 3.

TABLE 38
BANK SUSPENSIONS¹

<i>Total, all banks</i>		<i>Member Banks</i>		<i>Nonmember banks</i>	
		<i>National</i>	<i>State</i>	<i>Insured</i>	<i>Non-insured</i>
Number of banks suspended 1934-39 ..	291	15	6	189	81
1940	22	1	.....	18	3
1941	8	4	.....	3	1
1942	9	.....	.....	6	3
1943	4	2	.....	2	.....
1944	1	.....	.....	1	.....
1945	0	.....	.....	.....	.....
1946	0	.....	.....	.....	.....
1947	0	.....	.....	.....	.....
Deposits of suspended banks (in thousands of dollars) ²					
1934-39	125,991	14,616	26,548	44,348	40,479
1940	5,943	256	.....	5,341	346
1941	3,726	3,144	.....	503	79
1942	1,702	.....	.....	1,375	327
1943	6,223	4,982	.....	1,241	.....
1944	405	.....	.....	405	.....
1945	0	.....	.....	.....	.....
1946	0	.....	.....	.....	.....
1947	0	.....	.....	.....	.....

¹ Represents banks, which, during the periods shown, closed temporarily or permanently on account of financial difficulties; does not include banks whose deposit liabilities were assumed by other banks at the time of closing (in some instances with the aid of Federal Deposit Insurance Corporation loans).

² Deposits of member banks and insured nonmember banks suspended are as of dates of suspension, and deposits of noninsured nonmember banks are based on the latest data available at the time the suspension was reported.

Source: *Federal Reserve Bulletin*.

ducted a certain amount to cover expenses of management, and credited the depositors' accounts with the remainder. The heterogeneous metallic coins thus accepted were then reminted into coin of the realm and held as a reserve (of 100 per cent) against the deposit credits on the banks' books.

Here we have early manifestations of the 100 per cent reserve plan. Modern proposals differ, however, in that the banks would not be required to hold 100 per cent in specie behind demand deposits. In some cases it is proposed that government bonds be deposited with the central bank as security for reserve currency. In others, the central bank, or monetary authority, would take over the commercial assets behind demand deposits in exchange for currency to be held as the 100 per cent reserve.¹² On the whole, the modern proposals appear to amount to plans for monetizing commercial bank assets, these assets to be carried by the central bank or other monetary authority. The provision of the Emergency Banking Act of March 9, 1933, whereby banks could discount any sound assets at the Federal Reserve banks in exchange for Federal Reserve bank notes has a somewhat similar flavor.

The sponsors of the 100 per cent reserve plan apparently hope to attain two ends by its adoption. The first is the elimination of runs on banks and bank failures such as occurred in the twenties and during the great depression. The second is increased business stability. The inability of banks to expand and contract credit as they do under proportional reserve requirements would, it is felt, sharply limit business fluctuations.

On the first score—that of preventing runs and failures—the plan has some merit. Obviously, if depositors know that the banks are maintaining 100 per cent reserves against their deposits, they will not be worried at any time about their ability to withdraw their deposits at will, even in bad times. It would seem, however, that equally satisfactory results along this line can be accomplished through a sound system of deposit insurance, and with much less disruption of the existing banking set-up. Moreover, most of the plans do not provide for 100 per cent reserves against time and savings deposits. Many of the failures of the depression resulted from withdrawals of time deposits as well as deposits payable on demand. Consequently, the 100 per cent reserve

¹² See Watkins, L. L., *Commercial Banking Reform in the United States*, and an article by R. G. Thomas, "100 Per Cent Money," in the *Am. Ec. Rev.*, June, 1940, for more extended comments on the 100 per cent reserve plan.

plan might prove to be less effective than deposit insurance, which covers both classes of deposits.

As regards the value of 100 per cent reserves as a business stabilizer, the author is frankly skeptical. Most of the plans, as noted above, advocate 100 per cent reserves against demand deposits only. In such a case, time deposits and loans based on them could expand and contract with business fluctuations. If 100 per cent reserves were required against all deposits, doubtless business enterprises would take over the function of extending commercial credit. Trade credit already plays a significant role in business fluctuations and the probabilities are that the importance of that role would be considerably enhanced under the 100 per cent reserve plan.¹³

Before leaving this problem, it should be pointed out that the 100 per cent reserve plan, if adopted, would introduce an extremely radical reform into our banking system, which would result in great confusion to bankers and more expensive banking service to the community at large. If the plan was certain of accomplishing the high aims sometimes attributed to it, no objection could be legitimately raised to it on the score of disruption and confusion of existing arrangements. Since such certainty is decidedly lacking, however, this must be considered as a definite objection to the widespread adoption of the plan.

A compromise plan that would be sound theoretically and could be introduced in practice with a minimum of disturbance would be to require demand deposits to be offset on the asset side of the bank statement by commercial or business paper and reserves only.¹⁴ As commercial loans decreased, reserves would have to go up, and vice versa. Thus check currency could be created only through commercial borrowing, a procedure that would greatly assist the control of credit by central banking authorities.

Conclusion.—The problem of bank failures, so pressing in the years preceding 1933, appears to have been solved fairly satisfactorily through the establishment of a system of

¹³ For an elaboration on these criticisms, see the excellent article by R. G. Thomas previously cited. Other features of the 100 per cent reserve plan in relation to business stability are to be found in E. C. Bratt, *Business Cycles and Forecasting*, pp. 552-55.

¹⁴ The reason for this will be apparent upon a study of Chapter 34 on Possibilities of Credit Control.

deposit insurance that seems to be working out well. Another problem that attracted considerable attention before the war, and that may again attain some prominence, is the question of branch and group banking. This problem, together with the somewhat related one of banking consolidation, will furnish the subject matter for the following chapter.

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CHAPTER 22

BRANCH BANKING AND BANKING CONSOLIDATION

Introduction.—Although the branch banking question attained a peak of public interest in the twenties, it remains a problem of bank organization sufficiently important to merit rather detailed consideration. The question of chain and group banking is closely related, and the two may be considered together. In attacking this problem, the situation that has generally prevailed in foreign countries will first be briefly discussed, followed by an analysis of the advantages and disadvantages of branch as compared with unit banking. Thereafter, the development of branch banking in the United States will be given consideration and, finally, attention will be turned to the question of group banking and its general relation to the branch banking problem.

The situation in other countries.—For a great many years the banks in practically all of the commercially developed foreign countries have operated branch systems. That is, a given bank with its main office in a particular city would establish branch offices for the conduct of its business in various other towns and cities throughout the country. This type of organization is comparable with that generally found in many other lines of business where branches are established in different sections. The extent to which branch banking has been carried in a number of foreign countries may be illustrated by reference to England and Canada. Five English joint stock banks, known as the "Big Five," control over 90 per cent of the total banking resources of the system and operate in the neighborhood of 8000 branches. Canada now has 10 chartered banks operating somewhere near 4000 branches. In other countries as well as a substantial development of branch banking has occurred.

The advantages of branch banking.—From a theoretical point of view, branch banking has certain very definite advantages over unit banking. These result, for the most part, from the diversification of business of the bank's borrowers. In the first place, this means that the bank's own loans will be well diversified, with an attendant diminution of risk due to unfavorable factors affecting a particular industry. A second advantage of such diversification in the business of the bank's customers is that the demand for loans will vary from one locality to another, with the result that a surplus of funds in certain sections may be devoted to meeting the peak demand for accommodation in other communities. A result of this should be a tendency toward more uniform interest rates in different sections of the country than would prevail under unit banking. In the third place, a smaller proportional reserve is needed in an extended branch system than in a unit bank, because deposits and withdrawals tend more fully to offset each other in the branch system. The reserves, being under the centralized control of the main office, are then capable of being put to their most efficient use.

From a practical point of view, a branch organization also offers certain advantages. As a result of the control exerted by the main office, loans are more likely to be extended on a sound basis than in a unit bank where personal relations may warp the banker's judgment. Likewise, the employees of a large branch system are apt to be better trained bankers than many of those of the small unit institutions.

Practical drawbacks.—There are, however, certain practical disadvantages of an extended branch system. The habit of promoting employees by transferring them from smaller to larger branches and of sending out branch managers from the main office does not always give satisfactory results. Under this practice, a man may be sent to manage a branch in a territory where the economic conditions are decidedly different from those he is familiar with. He then finds that he must acquire much new banking knowledge before he becomes an efficient manager. By the time this knowledge is attained, he may be transferred to another office. Another drawback is that the branch manager, being necessarily more restricted than the

unit banker, at times may not be able to grant loans that are really sound, but that do not meet the requirements of the head office. It is probable, however, that such restrictions on branch managers would be beneficial in preventing bad loans more frequently than they would prove detrimental by preventing the extension of sound ones.

Historical development in the United States.—It will be recalled from an earlier chapter (Chapter 7) that both the First and Second Banks of the United States had branch systems that covered the then developed portions of the country. The State Banks of Indiana and Ohio also operated highly successful branch systems throughout their respective states, and branch banking was also carried on in Virginia and a number of other states with a considerable degree of success.

The National Bank Act of 1864 by implication prohibited the establishment of branch offices by newly organized national banks, and, since the national banking system practically supplanted the state systems for a considerable number of years, branch banking was almost nonexistent in the United States. Later in the century, with the re-emergence of state banking systems, the laws of certain states permitted branch banking, but the majority of them were silent on this question. Actually, branch banking was not an important problem until after the turn of the century.

The California banking law of 1909, which permitted statewide branch banking by state banks, was responsible for ushering in the widest development in this country since the Civil War. Although some 10 or 11 other states permitted varying degrees of branch banking at this time, by far the most extensive development occurred in California.

Despite the development of branch banking in California and, to a less extensive degree in other states, the branch banking problem did not attract a high degree of public attention until after World War I. In the decade of the twenties, however, it came to the fore as one of the most pressing problems of the day. The reason for this was alarm on the part of the Comptroller of the Currency concerning the decrease in the proportion of national banking assets in the banking system, a decrease he thought largely due to the

development of branch systems by state banks. Because of this, he urged legislation to permit the establishment of full-power branches by national banks; this legislation finally emerged in the McFadden Act of 1927.

Importance of home city branches.—The agitation about branch banking that developed before the passage of the McFadden Act in 1927 was largely concerned with the question of home city branches except in California where statewide branch banking had attained a significant development. The chief cause of concern, as noted, appeared to be the loss of national banking resources to the state systems. Thus the Federal Reserve Board, in its annual report for 1922, pointed out that the establishment of branches by the larger state banks "had gone so far in a few states, notably California, and in a few large cities, including New York, Cleveland, and Detroit, as to reduce greatly the number of national banks," and the utterances of the Comptroller of the Currency in his 1922 report were in a similar vein. The Comptroller of the Currency had ruled that national banks might, with his approval, establish "teller window" offices within the limits of the home city for the purpose of receiving deposits and cashing checks, but it was claimed that this authorization was not adequate to meet the competition of state banks with power to establish regular branches.

Branch banking provisions of the McFadden Act.—In the controversy surrounding the branch banking provisions of the McFadden Act, emphasis was accordingly placed, in large part, on the question of home city branches. While some observers advocated an extension of branch banking powers of national banks to a statewide basis where state institutions were allowed this privilege, they were distinctly in the minority. The McFadden Act as finally approved, therefore, did not extend the branch banking powers of national banks beyond a citywide basis.

Specifically, the act provided that national banks located in cities of more than 25,000 population might establish branches within the limits of the home city, provided that state banks were also permitted to establish branches. One branch only might be established in cities with a population of less than 50,000; two in cities with a population of more

than 50,000 but less than 100,000; and any number approved by the Comptroller of the Currency in cities of more than 100,000 population. Any state bank converting into or consolidating with a national bank, or any national bank consolidating with another, might retain all branches that were legally in operation on the date of approval of the act. Finally, any nonmember state bank operating branches outside the limits of the home city might join the Federal Reserve System only upon relinquishment of any outside branches established after the date of approval of the act, while member state banks were not permitted to establish additional outside branches after the date of approval of the act under the penalty of forfeiting their membership in the Federal Reserve System.

The obvious intent of these provisions was to confine the branch banking activities of national banks to a purely local territory and to prevent, so far as possible, by indirection the further development of outside branches by state banks. Home city branches are established merely for the convenience of customers, and branch systems of this restricted type have neither the main advantages nor the drawbacks of an extended branch system. In short, home city branch banking is not branch banking in any fundamental sense. The McFadden Act, therefore, was in reality decidedly hostile to branch banking development.

Later developments.—The extent to which the McFadden Act was successful in repressing the growth of branch banking throughout the rest of the decade is shown in Table 39, which summarizes branch banking development during the period 1924–1930. Apparently, it had some influence. While the total number of branches in operation increased from 2900 to 3618, or 25.8 per cent, the increase in home city branches—from 1929 to 2740—amounted to 28 per cent. The percentage increase in outside branches was only 18.2 per cent, the number of such branches increasing from 971 to 1148. A similar inference may be drawn from the trend of state banking legislation concerning branch banking. Between 1925 and 1929, the number of states permitting branch banking on a statewide basis declined from 12 to 9, thus indicating an increasing reluctance on the part

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TABLE 39
SUMMARY OF BRANCH-BANKING DEVELOPMENTS: 1924-1930¹

<i>Class of Bank or Branch, etc.</i>	<i>June 30, 1930</i>	<i>June 30, 1928</i>	<i>Feb. 25, 1927</i>	<i>June 30, 1924</i>
Number of banks.....	23,852	25,950	26,973 ²	28,996
Number operating branches:				
<i>Total</i>	817	835	779	714
Member banks, total.....	334	355	334	299
National.....	165	169	145	108
State.....	169	186	189	191
Nonmember banks.....	473	480	445	415
Size of branch systems: number of banks operating —				
1 branch.....	443	469	446	376
2 branches.....	144	150	127	129
3 to 5 branches.....	132	126	124	176
6 to 10 branches.....	38	35	35	
Over 10 branches.....	60	55	47	
Not classified.....	.....	.....	.....	33 ³
Location of parent bank: number in cities having in 1920 a population of —				
100,000 or more.....	344	372	353	289
50,000 to 100,000.....	78	81	65	108
25,000 to 50,000.....	80	66	61	
Less than 25,000.....	315	316	300	284
Not classified.....	.....	.....	.....	33 ³
Character of systems: number of banks operating —				
Home-city branches only.....	512	526	476	391
Outside branches only.....	256	262	261	283
Home-city and outside branches.....	49	47	42	40
Branches in operation				
<i>Total</i>	3,618	3,230	2,900	2,293
Of member banks.....	2,349	2,161	1,950	1,385
National.....	1,041	941	390	248
State.....	1,308	1,220	1,560	1,137
Of nonmember banks.....	1,269	1,069	950	908
Location of branches: number located —				
In home city of parent bank.....	2,470	2,214	1,929	1,508
Outside home city.....	1,148	1,016	971	785
Establishment of branches: number established —				
De novo as branches.....	2,410	2,214	1,996	.....
By purchase of banks.....	1,060	853	735	.....
No report of method.....	148	163	169	.....

¹ Source: *Federal Reserve Bulletin*, December 1930, p. 813.

² March, 1927.

³ Mutual savings and private banks.

of the states to permit a full-fledged branch banking development within their borders.

In considering the development of branch and group banking, it will be convenient to divide the period since 1921 into two parts, the first including those years prior to the great depression and the second the years following 1930. The figures for branch banking pertaining to the first part of the period, as presented in the preceding paragraph, do not indicate the real situation for the reason that a significant development of group banking had also occurred during these years. Group banking is tantamount to branch banking in effect, if not in form, so that a clear picture of the situation that prevailed requires a consideration of this type of banking organization.

Group banking.—The term “group banking” is used here to include what is sometimes referred to as “chain banking.” The Federal Reserve Board distinguished three types of chain or group systems as follows:¹

(1) Instances where control is exercised by a holding corporation, which has usually been formed by interests connected with one or more of the principal banks belonging to the system.

(2) Instances where control is exercised by the principal bank of the system, either through direct ownership of stock by the bank or through ownership by the stockholders or directors of the bank.

(3) Instances of ownership of controlling or substantial interest in a number of banks by an individual, family, or group of individuals.

Whatever the differences in the form of control may be, the object is the same in each case, namely, the operation of a number of ostensibly independent banks as a more or less cohesive unit. Obviously, an extensive development along group lines approximates an expansion of branch banking in a corresponding degree. The following table indicates the extent to which this type of banking was carried on in the United States on June 30, 1930, as compared with June 30, 1929.

During the year in question the number of groups increased by one, from 288 to 289, but the number of banks in groups showed a more substantial increase from 1802 to 2144. In none of the groups reported is the number of

¹ *Annual Report of the Federal Reserve Board, 1930; p. 20n.*

banks less than three, while the largest group operating in June 1930 was composed of 108 banks, and another approached it with 100 banks.

TABLE 40
GROUP BANKING DEVELOPMENT IN THE UNITED STATES
JUNE 30: 1929 AND 1930

Territory	Number of Banks							
	Total		National		State Member		Non-member	
	1930	1929	1930	1929	1930	1929	1930	1929
Total.....	2,144	1,802	830	647	131	108	1,183	1,047
Statewide branch banking permitted	86	72	46	36	2	4	38	32
Branches restricted as to location....	538	387	209	143	79	62	250	182
Branches prohibited.	1,242	1,087	437	363	44	36	761	688
No provision respecting branches.....	278	256	138	105	6	6	134	145

Source: *Federal Reserve Bulletin*, December 1930; p. 815.

It may readily be seen from the data presented in the table that the largest development of group systems occurred in those sections where branch banking is either prohibited by law, or where the establishment of branches is limited to the confines of the home city. The inference is that an extension of branch banking powers in these sections would probably result in a diminution in the number of groups operated.

Advantages and disadvantages of group banking.—As compared with unit banking, group banking has advantages that are similar, to a considerable extent, to those of branch banking. As compared with branch banking, on the other hand, the group form of organization has no outstanding merits and a number of decided drawbacks. From the banking point of view, a group system is less subject to continuous and uniform control than is a regular branch system. The units composing the group are managed by officers and directors as in any unit bank, and while it is true that the directors are dependent on the will of those in control of the group for re-election, it is likely to be more difficult to restrict their actions in

particular instances than it would be in the management of a branch.

The chief objection to group banking, however, is from the standpoint of the public. Groups may be made up of national banks, member state banks, and nonmember banks and may include banks operating in two or more states. These various elements of the group are under the supervision of a variety of authorities with diverse methods and standards, and they operate under a number of divergent laws. The difficulty of adequately protecting the public in such circumstances is great. The large branch system operating under one jurisdiction and subject to a single competent examining authority is decidedly to be preferred.

Resources of group and branch systems.—In the preceding survey of branch and group banking developments, attention was directed solely to the number of branches or of banks in groups. While this aspect of the situation is not without significance, it is subordinate in importance to a study of the proportion of banking resources controlled by branch or group systems. Information concerning this phase of the branch and group development is contained in Table 41, which gives the amounts of the chief resources (loans and investments) under the control of branch, group, and unit systems on June 30, 1930.

TABLE 41

LOANS AND INVESTMENTS OF BANKS IN, AND NOT IN, CHAIN OR GROUP SYSTEM,
OPERATING AND NOT OPERATING BRANCHES, BY AREAS. JUNE 30, 1930
(In Millions of Dollars)

Area	All banks	Banks in chains or groups			Banks not in chains or groups		
		Total	Not op- erating branches	Oper- ating branches	Total	Not op- erating branches	Oper- ating branches
United States.....	58,108	12,019	5,122	6,897	46,089	27,825	18,264
State-wide branch banking.....	6,524	2,195	236	1,959	4,329	2,241	2,088
Branches restricted as to location.....	36,843	6,121	1,601	4,520	30,722	14,629	16,093
Establishment of branches prohibited... No provision regarding branch banking.....	13,774 968	3,470 234	3,051 234	419	10,304 734	10,225 733	79 1

The figures indicate that out of a total of \$58,108,000,000 of loans and investments of all banks, \$30,283,000,000, or over 50 per cent, were controlled by banks in groups or banks operating branches. This exaggerates the extent of the development, however, as it includes those branch systems with home city offices only, which are not fundamentally real branch systems. A somewhat more accurate estimate will be obtained if the figure for banks operating branches in the statewide branch banking area is added to the figure for banks in groups. On this basis, the loans and investments of branch and group systems combined amounted to \$14,107,000,000, or just under 25 per cent of the total for all banks. This proportion, while lower than the other, is by no means unimportant; and the fact that \$9,825,000,000 of this \$14,107,000,000 represented loans and investments of banks in groups in the territory where branch banking was restricted or prohibited is sufficient to indicate the importance attained by the branch banking problem by 1930.

Branch banking since 1930.—The situation regarding branch banking prior to the great depression, as depicted above, was not greatly changed during the next few years. As a result of the growing interest in the question, the Committee on Banking and Currency of the House of Representatives held extensive hearings on the subject of branch, chain, and group banking during the first half of 1930. The findings of the Committee, published in two volumes and fifteen parts, contained much interesting material, but no action resulted from the investigation.

About a year later, however, a subcommittee of the Senate Committee on Banking and Currency, with Carter Glass as chairman, undertook a further investigation on the operation of the national and Federal Reserve banking systems. Much of this inquiry was directed along other lines, but the problems of branch and group banking were considered along with other matters.

The outcome of the deliberations of Senator Glass' committee was the Glass bill, which finally became the Banking Act of 1933. The bill went through five drafts before becoming law, and it is of interest to note that the third draft contained the provision that national banks, wherever

located, might establish branch offices throughout the state, or in an adjacent state if within fifty miles of the home office. A filibuster by Senator Long, however, prevented the inclusion of this forward-looking provision in the final act.

The Banking Act of 1933.—The branch banking provisions of the Banking Act of 1933 may be summarized here for the sake of convenience. Under this law, national banks were permitted to establish branches in the home city, county, or state, provided that state banks were allowed the same privilege. A minimum capital of \$500,000 was required for banks having out-of-town branches, except in states with small population and no large cities where a smaller minimum was specified. In any event, the capital of a national bank with branches had to equal the minimum capital required for a similar number of unit banks situated in the places where the branches were located.

As will be observed, these provisions were considerably less restrictive than those of the McFadden Act, which allowed national banks to establish home city branches only, and then only when state banks were allowed the same privilege. It will now be of interest to determine whether or not the broader provisions of the Banking Act of 1933 contributed, as might be anticipated, to a growth of statewide branch banking.

Recent branch banking development.—The long series of bank failures, discussed in the previous chapter, culminating in the exceptionally heavy mortality of the depression period, resulted in a suspension of a number of banks with branches, although the failures of statewide branch systems were negligible. In any event, at the end of 1933, the number of home city branches had declined to 1784 (from 2470 in 1930) while the number of out-of-town branches showed a much smaller decrease, from 1148 to 1127.

After 1933, the number of home city branches varied within a narrow range, declining slightly to 1740 at the end of 1939, prior to our entry into World War II. The number of such offices then increased gradually to 1808 at the close of 1946. The number of outside branches, on the other hand, increased slowly to 1889 at the end of 1939 and continued to increase to 2251 (exclusive of offices at military reserva-

tions) at the close of 1946, as shown in Table 42. Actually, it would be more realistic to count the 997 branches in the head office county as home city branches. On this basis, the division would be into 2805 home city and 1254 outside branches.

TABLE 42

NUMBER OF BANKS AND BRANCHES IN OPERATION ON DECEMBER 31, 1946

Geographic Division	Total All Banks	Total All Branches and Additional Offices	All Branches and Additional Offices Except Offices at Military Reservations, by Location				Offices at Military Reservations
			In Head Office City	Outside Head Office City			
				In Head Office County	In Con-tiguous Counties	In Non-Con-tiguous Counties	
United States	14,585	4,138	1,808	997	532	722	79
New England	886	334	148	124	56	5	1
Middle Atlantic	2,198	1,044	852	138	37	4	13
East North Central	3,033	605	303	243	42	11	6
West North Central	3,266	239	8	156	63	11	1
South Atlantic	1,611	468	156	98	113	82	19
East South Central	1,106	177	56	64	26	22	9
West South Central	1,608	87	25	47	7	2	6
Mountain	475	113	4	22	34	50	3
Pacific	402	1,071	256	105	154	535	21

Source: *Federal Reserve Bulletin*, June 1947, pp. 752-53.

As indicated in the table, real outside branches (those outside the home city and county) are concentrated in the Pacific states, with the South Atlantic region running a poor second. For the bulk of the country, branch banking at the close of 1946 continued to be of the home city and home county type, which differs materially from branch banking in a fundamental sense. Nevertheless, both home city and outside branches continued to increase in number after 1940.

Group banking since 1930.—A study of group banking, applying to the end of the year 1938, appeared in the *Federal Reserve Bulletin* for June 1939. This report shows that the number of banks in groups had declined from 2144

on June 30, 1930, to 440 on December 31, 1938. Moreover, the number of groups declined in the same period from 289 to 43. The decline in group banking funds, however, was much less severe, amounting to less than 41 per cent.²

Reference to Table 43 indicates a still further shrinkage of groups and the number of banks in groups to 33 and 387, respectively, at the end of 1945. Group banking funds, as indicated by deposits, were nearly three times as large in 1945 as at the close of 1938. However, deposits of all banks increased in approximately the same proportion, so that the relative importance of group banking funds was approximately the same at the end of 1945 as in 1938.

Group banking, after declining sharply in importance from 1930 to 1938, appears to be holding its own from the standpoint of the volume of funds controlled by banks in groups. If the Pacific states groups were eliminated, the picture would be materially changed, as can be seen from the table. Two groups made up of 36 banks, seven of which had 551 branches, controlled over one-third of the deposits held by all group banks in the country at the end of 1945. Aside from the West Coast, group banking was of major significance only in the West North Central states.

Table 44 presents the data on chain banking, also as of the end of the year 1945. While the number of chains is fairly large, the banking funds controlled by them in 1945 was relatively small. This would be expected in view of the fact that the banks in chains are controlled by one individual or a number of individuals instead of by a holding company. The question of chain banking is accordingly of secondary importance and requires no extended attention.

Foreign branches of American banks.—The foregoing pages have been devoted to a consideration of branch and group banking within the United States. A discussion of branch banking, however, may well include a brief review of the development of foreign branches by American banks.

² This estimate is based on the relation of group banking loans and investments to total loans and investments in 1930, when they amounted to 20.7 per cent of the total, and group banking deposits in relation to total deposits in 1938, the latter percentage being 12.3. Although the comparison is, therefore, not absolutely accurate, it is exact enough for our purposes. Moreover, deposits were a better indication of the control of banking funds in 1938 than were loans and investments.

TABLE 43
GROUP BANKING¹—NUMBER, DEPOSITS

Geographic Division 2	Number of Groups 2	Total Number of Group Banks 2	Total Deposits of Group Banks 3 (in thousands of dollars)	Group Banks Operating Branches or Additional Offices						
				Number of Banks	Number of Branches 4					Number of Offices at Military Reservations
					Total	In Head Office City	In Head Office County	In Contiguous Counties	In Non-Contiguous Counties	
United States	33	387	18,142,375	67	861	236	62	105	458	58
New England	4	31	2,301,285	15	87	54	12	1	—	—
Middle Atlantic	6	45	2,589,278	17	98	74	15	8	1	—
East North Central	3	32	1,144,245	4	27	25	2	—	—	—
West North Central	6	138	2,402,427	6	26	6	2	7	11	—
South Atlantic	5	41	1,269,563	8	20	5	—	—	15	6
East South Central	2	18	451,181	3	12	12	—	—	—	2
West South Central	3	11	771,811	1	—	—	—	—	—	1
Mountain	2	35	849,601	6	40	3	3	13	21	5
Pacific	2	36	6,362,984	7	551	57	8	76	410	44

¹ The term "group banking" indicates a type of multiple-office banking structure in which three or more independently incorporated banks are controlled directly or indirectly by a corporation, business trust, association, or similar organization.

² A group operating in more than one state has been assigned to the state in which the principal office of the controlling interest is located, but each constituent bank has been assigned to the state in which it operates. Only those states are listed in which one or more "group banks" were then in operation.

³ Included in the group figures are some banks that dominate the respective groups rather than being subsidiary banks; some of these are comparatively large banks.

⁴ Includes all branches and other additional offices at which deposits are received, checks paid, or money lent, except offices at military reservations. The latter consist mostly of "banking facilities" provided through arrangements made by the Treasury Department with banks designated as depositories and financial agents of the government; they are shown in the last column.

Source: *Federal Reserve Bulletin*, April 1947, p. 462.

TABLE 44
CHAIN BANKING¹ NUMBER, DEPOSITS, AND BRANCHES, DECEMBER 31, 1945

Geographic Division 2	Number of Chains 2	Total Deposits of Chain Banks (in thousands of dollars)	Chain Banks Operating Branches or Additional Offices						Number of Officers at Military Reservations
			Number of Banks	Number of Branches 3					
				Total	In Head Office City	In Head Office County	In Contiguous Counties	In Non-Contiguous Counties	
United States	115	4,628,101	45	74	23	35	15	1	10
New England	3	126,466	3	3	1	1	1	—	—
Middle Atlantic	5	405,197	8	17	4	11	2	—	2
East North Central	21	783,265	9	25	17	5	2	1	—
West North Central	46	1,931,381	16	25	1	17	7	—	1
South Atlantic	5	585,661	4	—	—	—	—	—	4
East South Central	3	19,794	—	—	—	—	—	—	—
West South Central	19	436,329	2	—	—	—	—	—	2
Mountain	8	249,572	1	4	—	1	3	—	1
Pacific	5	90,236	—	—	—	—	—	—	—

¹ The term "chain banking" indicates a type of multiple-office banking structure in which three or more independently incorporated banks are controlled by the same individual or individuals.

² A chain operating in more than one state has been assigned to the state in which the principal banking office of the controlling interest is located, but each constituent bank has been assigned to the state in which it operates. Only those states are listed in which one or more "chain banks" were then in operation.

³ Includes all branches and other additional offices at which deposits are received, checks paid, or money lent, except offices at military reservations. The latter consist mostly of "banking facilities" provided through arrangements made by the Treasury Department with banks designated as depositories and financial agents of the government; they are shown in the last column.

Source: *Federal Reserve Bulletin*, April 1947, p. 463.

The problems presented in this connection are somewhat different from those surrounding domestic branch banking. In the first place, there is little opposition to the establishment of foreign branches. It is solely to domestic branches that the unit bankers are opposed. The establishment of foreign branches may therefore be considered by American bankers purely on the merits of the case without reference to legal opposition.

After World War I, the leading position attained by New York as a world financial center led to the establishment of a very considerable number of foreign branches by American banks. By 1929 sixteen American banks and banking houses had 238 offices in 38 foreign countries. As is apt to be the case with any new development, this movement turned out to be overly optimistic, especially in view of the ensuing depression. Since 1930 the number of foreign offices has decreased substantially. At the outbreak of the war in 1939, the number of financial institutions operating foreign branches had declined to 10, the number of branches to 174, and the number of countries to 29.

As might be expected, the number of foreign branches of American banks decreased sharply in the course of World War II. This is clearly shown by the information contained in the Table 45.³ In addition to the 73 foreign branches of member banks at the end of 1946, stock was owned in five corporations engaged principally in foreign banking. "Two of the five have no foreign branches, one operates a branch in England, one operates a branch in France, and one has an English fiduciary affiliate. There is in operation one banking corporation, The Chase Bank, organized . . . to engage in international or foreign banking. The bank operates a branch in France, two branches in China, a branch in Hong Kong, and has a fiduciary affiliate in England."⁴ The

³ The 1939 figures in this table and the factual material in the preceding paragraphs are taken from an unpublished paper by Professor C. W. Phelps of the University of Chattanooga, who is the outstanding authority on American banking abroad. The author is greatly indebted to Dr. Phelps for this material. A full discussion of the advantages and disadvantages of foreign branches, omitted here for lack of space, is to be found in Dr. Phelps' earlier book, *Foreign Expansion of American Banks*, pp. 41-84.

⁴ Annual Report of the Board of Governors of the Federal Reserve System, 1946, p. 54.

TABLE 45

GEOGRAPHIC DISTRIBUTION OF AMERICAN BANKING OFFICES ABROAD
JUNE 30, 1939 AND DECEMBER 31, 1946

<i>Country</i>	<i>Number, June 30, 1939</i>	<i>Number, December 31, 1946 *</i>
<i>Europe</i>		
Belgium	5	1
Denmark	1	
England	20	10
France	12	1
Germany	3	
Greece	2	
Holland	2	
Italy	35	
Spain	2	
Switzerland	4	
<i>Total</i>	86	12
<i>Latin America</i>		
Argentina	9	10
Brazil	4	4
Chile	2	2
Colombia	3	3
Cuba	18	16
Dominican Republic	6	
Mexico	1	1
Panama and Canal Zone	8	7
Peru	1	1
Puerto Rico	7	7
Uruguay	1	1
Venezuela	1	1
<i>Total</i>	61	53
<i>Asia and Rest of World</i>		
China	12	2
Egypt	1	
Hong Kong		1
India	6	2
Japan	4	1
Manchuria	2	
Philippines	1	1
Singapore		1
Straits Settlements	1	
<i>Total</i>	27	8
<i>Grand Total</i>	174	73

* Member banks only.

Source: Thirty-third annual report of the Board of Governors of the Federal Reserve System, 1946, p. 53.

foregoing offices, added to member bank foreign branches, increases the total from 73 to 81 foreign offices.

It is hardly worth while to speculate on the future development of American bank branches abroad. If the economies of most foreign countries can be put on a sound basis and a lasting peace assured, a substantial development of foreign branches by American banks would appear certain. Until such time arrives, however, prediction is hazardous and of little value.

Conclusion.—The branch banking question continues to be one of the important commercial banking problems of the day. Although the years since the banking crisis have witnessed a steady increase in the number of out-of-town branches in those states permitting statewide branch banking, there still is much opposition to this form of banking organization on the part of many unit bankers, while some thirty states still restrict or prohibit branch banking activities.

From the point of view of the efficiency and soundness of the American banking system, a further development of domestic branch banking is called for. Nevertheless, it would appear to be the better part of wisdom to proceed slowly to the end that such further development should be sound and permanent. A first step might well be the passage of an amendment to the National Bank Act permitting national banks, wherever located, to establish branches on a statewide basis. Such action would doubtless lead practically all the states that now limit or prohibit branch banking to extend the privilege of statewide branch systems to their banks.

After statewide branch banking had developed and become familiar to both bankers and their customers, an extension of the territorial limits to larger areas than the states would be desirable. One objection to statewide branch banking only is that some states are too small and others lack sufficient diversity of industry to attain the diversification of assets that is one of the major advantages of branch banking. By dividing the country up into larger regions and allowing branch banking throughout these more extended areas, such diversification could be attained. The use of Federal Reserve districts, or combinations of Federal Reserve districts,

suggests itself as a convenient method of determining the boundaries of these larger regions.

An extension of branch banking to a regional basis, as suggested, would destroy much of the motive that now exists for banking chains and groups and would probably lead practically to the disappearance of this latter form of banking organization.

In a country the size of the United States the extension of branch banking beyond the scope of economically diversified regions seems of somewhat doubtful wisdom. In any event, such a development should not be contemplated for many years. Moreover, extension of branch banking even to a statewide or regional basis should be accompanied by adequate capital requirements and efficient supervision to the end that the growth may be a healthy one.

TABLE 46

NUMBER AND RESOURCES OF BANKS IN THE UNITED STATES BY CLASSES:
JUNE 1921-1946

(Resources in millions of dollars)

Year	All Active Banks		Member Banks		Mutual Savings Banks		All Other Active Banks	
	Number	Re-sources	Number	Re-sources	Number	Re-sources	Number	Re-sources
1921	30,812	49,585	9,745	29,639	623	6,040	20,444	13,906
1926	28,146	64,686	9,375	40,845	620	8,422	18,151	15,419
1931	22,071	69,757	7,782	45,289	600	11,192	13,689	13,276
1933 ¹	14,624	51,294	5,606	33,047	576	10,967	8,442	7,280
1936	15,803	67,188	6,400	46,534	566	11,409	8,837	9,245
1941	14,919	87,829	6,556	64,857	550	11,996	7,813	10,776
1946	14,633	172,167	6,887	131,400	541	18,054	7,192	26,872

¹Licensed banks only.

CONCENTRATION OF BANKING

The trend toward larger banks.—Another development that has occurred since 1920 is a trend toward larger banking institutions. The general tendency in this direction may be observed from Table 46, which shows the number and resources of various classes of banks (except private banks) in operation in the United States and possessions by selected years from 1921 to 1946. Taking the banking system as a

whole, resources increased each year from 1921 to 1930, thereafter decreased during the depression, and finally, increased again by 1946 to a figure of \$172,167,000,000. Meanwhile, the total number of banks, which reached a peak of 30,812 in 1921, declined steadily⁵ to 14,633 in 1946, the average resources per bank increasing from \$1,644,000 to \$11,766,000 during the period in question.

While the general tendency toward larger units is thus clearly discernible, a more vivid picture of the situation may be obtained by reference to certain additional figures. At the end of June 1946 there were 6887 member banks in the Federal Reserve System, amounting to 47 per cent of all banks. These banks reported total resources of \$131,400,000,000 or 76.3 per cent of the total for all banks. Thus, slightly less than one-half of the country's banks controlled more than three-fourths of the banking resources. If mutual savings banks, a specialized type of institution, are omitted from the calculation, the result is even more striking. In that case, member banks constituted 48.9 per cent of the number and controlled 85.3 per cent of the resources.

The point of greatest concentration of banking resources is naturally the financial center of the country, New York city. On December 31, 1946, thirty-seven New York member banks held total resources of \$27,380,000,000. These member banks constituted about $\frac{1}{4}$ of 1 per cent of all the banks in the country, yet they controlled over 16 per cent of total banking resources.

Purposes of banking concentration.—The chief method by which the concentration of banking resources is effected is the consolidation of existing banking institutions. Such consolidation may have as its purpose the building up of a branch banking system. An illustration of this is the Bank of Italy (California) which, in March 1927, absorbed the Liberty Bank of America and the Commercial National Bank of Los Angeles, and in the same month converted to a national bank under the provisions of the McFadden Act. This consolidation gave the Bank of Italy 178 added branches and increased its deposits by \$172,260,087.25.⁶ Other merg-

⁵ With the exception of 1933 and 1934.

⁶ *Hearings, H. Res. 141*, p. 1345.

ers, chiefly in California, had the same end in view. More recently, Dr. Marcus Nadler, speaking before the American Bankers Association in its 1947 annual convention, predicted a wave of mergers in the banking system in which many small banks would be absorbed by larger ones and converted into branches, due to high operating costs and low interest income.⁷

Another purpose of consolidation is to prevent the failure of the absorbed banks. A number of instances of this sort occurred in 1930-1931, when the depression in industry brought some banks to the brink of insolvency. The absorption of practically insolvent banks by stronger institutions is justifiable for purposes of maintaining confidence in times of depression, provided that the merger does not unduly weaken the absorbing bank.

A third purpose, and the most significant one in normal times outside of California, is to increase the bank's capitalization and deposits in order to furnish more adequate banking service to its customers. The decade 1921-1930 witnessed a rapid concentration in industry, and it became necessary for the banks to increase their size in order to meet the credit needs of the larger industrial units. Moreover, apart from consolidation to prevent the failure of absorbed banks, many of the failures that occurred during and immediately following the banking crisis of 1933 consisted of small banks that were not absorbed. The remaining banks were naturally larger and, also naturally, increased in size in order to take on the business of customers of small banks that had failed.

While it has been stated that consolidations for the purpose of building up branch systems were confined largely to California, it should not be forgotten that a similar aim was responsible for the development of group banking especially in the twenties in other sections of the country. Although the banks entering groups are not included in the merger figures, a very significant concentration of banking control accompanied the development of group banking. Moreover, there was a very considerable number of two-bank affiliations that do not appear in the figures for banks in groups.

⁷ See *Wall Street Journal*, Sept. 30, 1947, p. 6.

Affiliations of this sort are not indicative of a desire to develop branch banking systems, but they are tantamount to mergers for the purpose of developing a more complete banking service.

As a final purpose of bank consolidation, the desire to outdo a rival institution cannot be entirely ignored. When two or three large banks in the same locality each want to be able to claim the largest capital and resources in the community, the attempt either to attain or to hold this distinctive position doubtless leads at times to mergers that otherwise serve no useful purpose.

Conclusion.—In addition to the problems that have been treated in this and the preceding chapter, there remains the question—of definite interest to bankers—of the relation of the government to the commercial banks. This important topic will constitute the subject matter of the next chapter.

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CHAPTER 23

GOVERNMENT' SUPERVISION AND COMPETITION

Introduction.—The government may impinge on the banking system through its supervision and examination of the banks in the system or through the establishment of credit agencies that compete with the banks by making loans that would otherwise be extended by the banks themselves. It is also possible for the government to exert considerable control over banking operations through control of the central bank management. The latter possibility is dealt with in other connections and need only be mentioned here. In this chapter, we shall be concerned with government supervision and with the problem of direct government competition with the commercial banks of the system.

BANK EXAMINATIONS AND SUPERVISION

The need for bank examinations.—A consideration of public bank supervision in various countries discloses the fact that this practice is more highly developed in the United States than in the great majority of other countries. There has been government inspection of banking in Canada since the failure of the Home Bank in 1923 and rather complete governmental supervision was instituted in Germany after the crisis of 1931, but many European countries have had no system of examinations for their commercial banks.

The explanation of this difference in practice between the United States and the majority of other countries is to be found in our far-flung system of unit banks, many of them of small size and not too competently managed. In a system of this sort bank examinations are essential to the reasonably sound operation of banking institutions. The fact that approximately 7000 banks in the United States failed in the decade just prior to the depression, however, shows that the

practice of bank examinations, as carried out in this country, was by no means complete assurance against unsound banking procedure. This was due partly to the type of examination conducted under certain jurisdictions and partly to the fact that no system of examinations, however efficient, can offset the effects of incapable and inefficient management.

In other words, with sound, honest, and able bank management, examinations would be unnecessary. It is nevertheless true that careful and thoroughgoing bank examinations may help to improve the character of bank management; this is shown by the fact that, in the long series of suspensions during the decade prior to the depression, member banks, which were under relatively efficient supervision, were less subject to failure than nonmember institutions.

The development of bank supervision in the United States.—It is unnecessary here to dwell at length on the historical development of bank supervision and examination in this country, as the pertinent facts have been related in earlier chapters.¹ In the period prior to the Civil War, state supervision of banks was either lacking entirely or conducted with varying degrees of inefficiency. Toward the close of the period bank examinations by state boards or supervisors became fairly common and some of the examining authorities² performed their tasks with a high degree of ability. Nevertheless, the process of bank supervision could not be said to have attained a high degree of development prior to the establishment of the national banking system.

The National Bank Act created the office of Comptroller of the Currency and gave its incumbent wide supervisory authority over national banks. Since the national banking system almost completely displaced the systems of state banks for a number of years, the banking system was for a time under unified supervision. Since the Comptroller of the Currency, through his staff, conducted rather searching examinations of national banks, it may be stated that, during the period 1866-1880, banking supervision was carried on in a satisfactory fashion in the American banking system.

¹ See especially Chapters 7, 8, and 9.

² E.g., in Louisiana under the banking law of 1842.

With the recrudescence of state banking, which began in the eighties, bank supervision assumed a less satisfactory aspect. The Comptroller of the Currency, having no authority over state institutions, was not in a position to assure sound examinations of any but national banks. Supervision of state banks, on the other hand, developed slowly and, although practically all states had bank examiners by 1913, the intensity and quality of the examinations conducted varied decidedly in different parts of the country. In some states the supervision compared very favorably with that of national banks, but in others it was so lax as to be of little benefit.

During the period prior to the establishment of the Federal Reserve System, public supervision of banks was supplemented in some of the larger cities by self-imposed examinations conducted through the local clearing house associations. While the majority of these examinations were highly efficient, it is clear that the number of banks involved was but a small minority of all the banks of the country.

Lack of uniformity.—Just as the diversity of laws and jurisdictions has impeded banking development generally in the United States, the lack of uniformity in the matter of supervision has prevented the attainment of an efficient system of examinations for all the banks of the country. Since the latter part of the nineteenth century, therefore, the major problem involved in the question of bank examination has been the attainment of a system of uniform examinations of high caliber for all banks.

With the establishment of the Federal Reserve System, progress was made in improving the examinations of some state banks. The Federal Reserve agent in each Reserve bank was required to examine the state member banks in his district, national bank examinations continuing under the jurisdiction of the Comptroller of the Currency as before. This did not greatly improve matters for a time, but after the influx of state banks into the Federal Reserve system in 1917, a considerable improvement resulted among state member banks in certain states in which the examinations conducted by the state authorities were not satisfactory. In

practice, the Federal Reserve agents accepted the examinations of the state authorities where these were of sufficiently high grade, but conducted their own examinations where those carried out by the state were deemed to be inadequate.

Another step toward improvement in state bank examinations resulted from the provisions of the Banking Act of 1933, which required the management of groups and chains of banks to permit the examination of non-member banks in the group by the Federal Reserve authorities in order to obtain a voting permit. The examining activities of the Federal Reserve banks in 1934, after these provisions went into effect, are summarized in the following quotation from the *Annual Report of the Federal Reserve Board* for that year:³

"Under the provisions of the Federal Reserve Act State member banks are subject to examinations made by direction of the Federal Reserve Board or of the Federal Reserve banks by examiners selected or approved by the Federal Reserve Board. The examinations of State member banks made under the provisions of the Federal Reserve Act are made by examiners for the various Federal Reserve banks, whose appointments are approved by the Federal Reserve Board and who work under the direction of the Federal Reserve agents. The policy approved by the Federal Reserve Board provides that at least one regular examination of each State member bank, including its trust department, be made during each calendar year by examiners for the Federal Reserve banks, either independently or jointly with State banking authorities.

"In order to avoid duplication of examinations and minimize any inconvenience to the banks examined, most of the examinations of State member banks made by examiners for the Federal Reserve banks were joint examinations made in cooperation with the State banking authorities.

"In connection with the consideration of applications of holding company affiliates for voting permits, arrangements were completed, wherever practicable, to have the various banks controlled by the same holding company affiliate examined as nearly as practicable as of the same date in order that a comprehensive picture of the entire group might be obtained and information concerning various relationships within the group be developed. Such arrangements were worked out in cooperation with the chief national bank examiners in the various districts and the State banking authorities, the national banks being examined by the national bank examiners and the State banks by the State authorities and examiners for the Federal Reserve banks.

"During 1934 a conference was held in Washington of the Assistant

³ Pp. 54-55.

Federal Reserve agents in charge of examinations for the Federal Reserve banks, the chief examiners and the trust examiners for the Federal Reserve banks, and representatives of the Federal Reserve Board. The conference was called at the request of the Federal Reserve Board in order that those in charge of the examination work for the Federal Reserve banks and the representatives of the Board in Washington might consider together the questions involved in the examination of the State member banks and that the examination activities of the various Federal Reserve banks might be further coordinated and a more uniform procedure developed."

Extension of Federal examining powers.—In spite of the activities of the Reserve banks in examining state institutions, as just outlined, many thousands of nonmember state banks still operated outside the scope of Federal examinations. This situation was drastically altered by the institution of deposit insurance in 1934. The Federal Deposit Insurance Corporation perforce had to have full information regarding the soundness of banks desiring to have their deposits insured. As to member banks of the Federal Reserve System, adequate data from the reports of the Federal Reserve agents and the Comptroller of the Currency were available. Since nonmember banks could participate in the insurance plan, however, the F.D.I.C. was given broad powers in the examination of such institutions.

The extent to which this authority increased Federal supervision of state banks was very substantial. On December 31, 1946, 13,550 out of a total of 14,759 banks in the United States and possessions were insured. Of the uninsured banks, 350 were mutual savings banks and 83 were trust companies not accepting deposits, leaving but 776 uninsured commercial banks and trust companies accepting deposits, as compared with 6462 nonmember commercial banks and trust companies that were insured and that hence came under the examining jurisdiction of the Corporation.

Quite apart from the question of the desirability of deposit insurance as such, the F. D. I. C. has undoubtedly performed a valuable service in connection with its examining activities. Not only do these examinations tend toward improvement in the operation of nonmember banks, but the publication of their results furnishes the student of banking with data for the overwhelming majority of these banks in

a form not previously obtainable for this group of institutions.

Continued evidence of cooperation.—In general, the various examining agencies in the United States have cooperated in satisfactory fashion to assure coordination and uniformity of examining procedure. As an example of cooperation in this field, the following joint statement, issued by four groups of examining authorities in the latter part of 1947 may be cited:

"Our country is experiencing a boom of dangerous proportions. The volume of bank credit has been greatly inflated in response to the needs for financing the war effort. Domestic and foreign demands for goods and services are exerting a strong upward pressure on prices in spite of the high volume of our physical production. These demands would be inflationary without any further increase in the use of bank credit, but the demand is being steadily increased through continued rapid expansion in bank loans, in addition to other factors outside the control of the banking system.

"A substantial increase in production, agricultural as well as industrial, would be highly beneficial. However, increases can only take place slowly and to a limited degree. In industry, they are dependent upon corresponding increases in the available supply of basic raw materials, plant capacity, and the number and productivity of the labor force. Therefore a further growth of outstanding bank credit tends to add to the already excessive demand and to make for still higher prices.

"The Board of Governors of the Federal Reserve System, the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Executive Committee of the National Association of Supervisors of State Banks are unanimously of the view that present conditions require the bankers of the country to exercise extreme caution in their lending policies. It is at times such as these that bad loans are made and future losses become inevitable.

"It is recognized that a continued flow of bank credit is necessary for the production and distribution of goods and services. The banks of the country have adequately met this important need in the reconversion period. Under existing conditions, however, the banks should curtail all loans either to individuals or businesses for speculation in real estate, commodities or securities. They should guard against the overextension of consumer credit and should not relax the terms of instalment financing. As far as possible extension of bank credit under existing conditions should be confined to financing that will help production rather than merely increase consumer demand.

"The bank supervisory authorities strongly urge directors to see that their banks follow these policies and maintain adequate capital in relation to risk assets."

A statement of this sort should be helpful to bankers and also indicates the intent of the examiners to scrutinize credit extensions with unusual care in view of the seriousness of the situation.

Desired reforms.—In spite of the increase in the scope of Federal supervision as a result of the institution of deposit insurance, some reforms are still to be desired. In the first place, it would seem logical and helpful to concentrate the examining activities of the Comptroller of the Currency, the Federal Reserve agents (and the Board of Governors of the Federal Reserve System), and the F.D.I.C. in the hands of a single supervisory authority. One possible course of action would be to establish a Federal Bank Examination Board, under the jurisdiction of the Board of Governors, to undertake the task of bank examination for all insured banks, including national and state member as well as non-member institutions. The chairman of such a Board, were it established, would naturally supplant the Comptroller of the Currency, whose office might then well be abolished.

Possibly a simpler solution to the problem would be to concentrate all Federal examining powers in the hands of the F.D.I.C., which might properly examine all insured banks including national and state member institutions. It is true that there is satisfactory cooperation among the different existing Federal authorities, but a concentration of power would eliminate duplication of facilities and should lead to a reduction in the expense of conducting examinations as far as total expenditure is concerned.

While this is the simple solution, the author feels that the first suggestion would be more appealing to the Board of Governors of the Federal Reserve System. The Board apparently feels that upon occasion, in spite of a substantial degree of cooperation, the difference in attitude between the Board and the other agencies may have interfered with the Board's credit policy. This is to be inferred from the following quotation from the Board's *Annual Report* for 1938:⁴

"Diffusion of authority has also been responsible for difficulties in establishing uniform policies in connection with bank examinations. While

⁴ P. 4. Later pages of the *Report* contain a full discussion of the problem.

a voluntary agreement has been worked out between the three principal Federal supervisory agencies—the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Board of Governors—the permanence of this arrangement depends on continuous agreement between the agencies on the policies involved, and its effectiveness depends upon a uniform interpretation of the policies adopted. The interpretation, however, may vary from time to time in accordance with the points of view of those responsible for the policies of the three agencies.

“The Board wishes to raise a broad question as to the relationship that should exist between general credit policies and policies pursued in the examination and supervision of banks. There have been times in the past when these policies have worked in opposite directions, with a consequent aggravation of deflationary and inflationary trends.”

In spite of the attitude of the Board, as expressed above, it is the judgment of the author that the simplest and most desirable change in examining regulations would be to concentrate all Federal examining authority with the F.D.I.C. Not only is the Corporation equipped to handle the problem, but it is the logical institution to be given the task of attempting to attain sound operation of those banks for the insurance of whose deposits it is responsible. Moreover, it is a grave question whether sound standards of examination should ever be markedly relaxed as an adjunct of credit policy.

A second desirable reform would be to place bank examiners under the Civil Service and to require them to pass rigid examinations as a prerequisite to their appointments. In this connection, it should be noted that salaries should be sufficiently high to attract and retain high-grade men in the field. With surety of tenure and adequate remuneration for members of the examining staff, it would be reasonable to suppose that the quality of bank examinations might be substantially improved, although Federal examinations at present appear to be of a fairly high caliber.

Despite the fact that adequate and unified bank examinations are necessary and desirable in a banking system such as that of the United States, it cannot be too much emphasized that bank supervision is not and can never be a substitute for sound bank management. The best that efficient supervision can do is to prevent fraud and illegal practices and, by suggestion and instruction, do something to improve the management in cases where it is notably inferior.

GOVERNMENT COMPETITION WITH COMMERCIAL BANKS

Competing agencies.—Turning our attention from the subject of government supervision of banking to the question of direct competition of government credit agencies with the commercial banks, we can see, even by a casual survey of the available data, that, while the number of such government agencies is considerable, the amount of direct competition between these agencies and the banks is not great. A list of the chief competing government credit agencies is as follows:

- Federal Farm Mortgage Corporation
- Federal Intermediate Credit Banks
- Banks for Co-operatives
- Commodity Credit Corporation
- Rural Electrification Administration
- Farmers' Home Administration
- Home Owners' Loan Corporation
- Federal Public Housing Authority
- Federal home loan banks
- R.F.C. and affiliates
- Export-Import Bank

Until June 26, 1947, the Federal land banks would have been included in the above list, as the government still owned some of the capital (and surplus) of the Federal land bank at St. Paul, but this has been paid to the Treasury, so that, since the date mentioned above, the government has had no proprietary interest in any of the twelve Federal land banks.

Extent of business.—The extent of the lending business of the various government corporations and agencies listed above is indicated for June 30, 1947, in the accompanying table, taken from the *Federal Reserve Bulletin*, which classifies the loans of these agencies according to both the agency making the loan and the purposes for which the loans were made.

It will be observed that the total of loans receivable (net) amounted to \$7,662 million on June 30, 1947—a very substantial figure. We must not infer, however, from this large total of loans that the amount of government agency

TABLE 47
CLASSIFICATION OF LOANS BY PURPOSE AND AGENCY

Purpose of loan	June 30, 1947												March 31, 1947, all agencies
	Fed. Farm Mort. Corp.	Fed. inter-mediate credit banks	Banks for co-operatives	Commodity Credit Corp.	Rural Electrification Adm.	Farm. Home Adm.	Home Owners' Loan Corp.	Fed. Public Hous. Auth.	Fed. home loan banks	R.F.C. and affiliates	Export-Import Bank	All other	All agencies
To aid agriculture.....	131	393	170	121	630	601	.....	.....	.....	(1)	.....	7	2,053
To aid home owners.....	.....	.....	.....	.....	.....	557	.....	.....	.....	76	.....	28	660
To aid industry:													
Railroads.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	147	.....	17	164
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	141	.....	32	224
To aid financial institutions:													
Banks.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	5	6
Other.....	.....	.....	.....	.....	.....	.....	.....	.....	289	4	.....	.....	203
Foreign loans.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	250	1,758	2,050	4,058
Other.....	.....	.....	.....	.....	.....	.....	.....	278	.....	222	(1)	96	597
Less—Reserve for losses.....	27	(1)	1	12	1	276	13	.....	.....	47	7	9	393
Total loans receivable (net).....	104	393	169	110	629	325	544	278	289	845	1,751	2,226	7,662
													7,294

¹ Less than \$500,000.

Source: *Federal Reserve Bulletin*, November 1947, p. 1404.

competition with the commercial banks is considerable, for analysis of the data will indicate that such is, in fact, not the case.

Analysis of data.—Referring once again to the table, it will be seen from the column giving the loans of all agencies on June 30, 1947, that slightly over \$4 billion of the total represented foreign loans, while some \$2 billion were loans to aid agriculture, nearly six-sevenths of total loans being for these two purposes.

Let us consider, first, foreign loans, by far the largest item in the total. Of these, \$250 million were extended by the R.F.C., \$1.758 million by the Export-Import Bank, and slightly over \$2 billion by other unclassified agencies. It may be stated, without fear of contradiction, that the great bulk of these loans, if not all of them, are not competitive with the loans of the commercial banks. They represent government-sponsored lending activities in the postwar period. Most of them are fairly long-term and the degree of risk involved is considerable. This is not the type of lending that may properly be undertaken by the commercial banks. The lending activities of government corporations or agencies in this field at such a time may be considered as supplementary to, rather than competitive with, lending on the part of the commercial banks. We may therefore conclude that government competition with the banks in regard to this major item is practically nonexistent.

The other large item in the list of loans made by government agencies consists of that group of loans made to aid agriculture. It must be admitted that there is more evidence of government agency competition here than in the case of foreign loans. Yet the Federal Farm Mortgage Corporation, the Rural Electrification Administration, and the Farmers' Home Administration are engaged in making investment-type loans that should not compete directly with bank loans in rural communities. While the so-called commercial banks in rural communities have substantial time deposits, some portion of which may properly be used in the extension of conservative real estate loans, this is—or should be—a part of their savings department business. Here there is unquestionably considerable direct competition from other

lenders, but the competition is more largely from the Federal land banks and insurance companies than from government agencies. Even so, according to a joint survey of agricultural loans conducted by the Board of Governors of the Federal Reserve System and the F.D.I.C., insured commercial banks had some \$725 million of farm real estate loans outstanding in mid-1947 and were competing actively for this type of business in the postwar period.

As to production loans to agriculture, the survey referred to estimated that insured commercial banks had nearly \$1.5 billion of these loans outstanding at mid-1947. This figure is far in excess of comparable loans made by government agencies as shown in the table.

Loans to industry by government agencies consist almost entirely of loans by the R.F.C. and affiliates, as indicated in Table 47. The total of these loans, amounting to \$337 million, was trifling as compared with the \$14,765 million of commercial and industrial loans of insured commercial banks on the same date. Actually, there is no competition whatever between the R.F.C. and the commercial banks, as the R.F.C. loans are of a type that would not be granted by the commercial banks in any event.

The only other relatively large item shown in the table consists of the more than half billion dollars of loans of the Home Owners' Loan Corporation. This corporation was organized in the great depression to take over real estate loans on homes from the banks in exchange for its own government-guaranteed securities. It was thus designed to aid the banks (and the home owner borrowers) and not to compete with them. Its obligations have been retired, the government now owning the complete interest in the corporation.

Our conclusion from the analysis of the data presented in the table must be that direct competition of government agencies with the commercial banks is practically non-existent except in the agricultural field and that, even there, it is not nearly so great as is frequently supposed.

Federal Reserve bank competition.—Although the Federal Reserve banks are owned entirely by the member banks and are hence not included under the head of government

agencies, they are largely under the control of the Board of Governors, a politically appointed body. Consequently, any direct competition between the Reserve banks and the member or nonmember commercial banks would be looked on as government competition in the banking field.

The Federal Reserve Act permits the Reserve banks to make a limited amount of direct loans to industry for working capital purposes and also permits the Reserve banks to discount the notes of individuals, partnerships, and corporations if said notes are secured by obligations of the United States. Through these provisions, it might appear that the Reserve banks are in a position to compete with member banks.

As a practical matter, there is no effective competition between the commercial banks and the Reserve banks. The latter institutions may make industrial loans only to business concerns that are unable to obtain accommodation through regular banking channels, and the amount of such advances has never been large, being only slightly over \$4 million near the close of 1947. The right to make advances secured by government bonds was enacted chiefly as an emergency provision. It is now used mainly to enable the Reserve banks occasionally to discount notes so secured for nonmember banks or others, the total of such discounts being slightly over \$37 million toward the end of 1947.

Insurance of loans.—Fully as objectionable as government competition is the practice of insurance of loans by government or quasi-government agencies. Some considerable amount of such loan insurance has been in connection with war production and contract termination loans, loans to veterans, etc. The F.H.A. has partially insured certain real estate loans and the Federal Reserve banks have insured member banks to the extent of 80 per cent against losses on certain industrial loans. To the extent that such insurance came into being as a result of the war, there is little ground for criticism. Insurance of loans as a permanent policy, however, cannot be readily defended. Recent recommendations of the Board of Governors that the power of the Reserve banks to grant industrial loans be repealed, but that their power to insure industrial loans of member banks (up to 90

per cent) be broadened is a case in point. Such insurance tends to lessen the cautions of the banker in extending loans and may easily result in making loans that should never have been granted under sound banking standards. It would be better if the Reserve banks' powers to grant industrial loans and to insure loans were both repealed.

Conclusion.—In considering, in this section of the text, the major problems that confront or have confronted the banking system, we have completed in large part our survey of the banking process in the United States. Attention still must be given to the important question of monetary and credit control, but this had best be deferred, pending a consideration of the principles governing the value of money and international monetary relationships. The following chapters will accordingly be concerned with the latter subjects.

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PART V

THE VALUE OF MONEY

CHAPTER 24

THE MEANING AND MEASUREMENT OF THE VALUE OF MONEY

Introduction.—In earlier chapters it has been remarked from time to time that certain of the more complex problems of banking, particularly central banking, require for their understanding a knowledge of the forces and factors that determine the value of money. Having discussed the technique of banking and the development of the American banking system, we are ready to return to the subject of money and to undertake an analysis of the principles that show how the value of money is determined. Before proceeding on this basis, however, it is necessary to indicate just what is meant by the value of money, and to show how this value—or, rather, changes in it—may be measured. The present chapter will accordingly be devoted to these aspects of the subject.

THE MEANING OF THE VALUE OF MONEY

A definition of the value of money.—The value of money may be defined as its *power or ability to command goods and services in exchange*. The same definition of the value of any economic good would hold in our present exchanging order, but a certain difficulty arises in connection with the measurement of the value, or changes in the value, of money that do not exist in the case of other economic goods. The difficulty arises from the fact that the values of all other economic goods are expressed in terms of money. Naturally, then, money cannot be used to express or measure its own value, for such a procedure would be meaningless. To say that wheat is worth a dollar a bushel at a given time would clearly indicate the value of wheat as compared with either the value of various other economic goods or that of wheat itself upon some other occasion. To say that a dollar is

worth a dollar at a given time discloses nothing either as to the value of the dollar compared with the values of other goods, or as to the value of the dollar on that day compared with its value at some earlier date. This is bound to be the case because the government has, by law, ruled that a fixed amount of fine gold shall constitute a dollar at all times. In other words, the government has fixed the *price* of gold, so that it is quite impossible for the price of a dollar to change, although its *value* may vary considerably from time to time.

Since the price of the gold in the dollar has been fixed, how are we going to tell what its value is, and whether or not it changes from time to time or remains relatively stable? Referring again to the price of wheat which is, say, one dollar per bushel, we might say that a dollar was worth a bushel of wheat, but, if we did so, and the price of wheat then rose to two dollars a bushel, we should be forced to say that a dollar was worth only one-half of a bushel of wheat. This would be correct as applied to wheat only, but during the interval in which the price of wheat had risen from one to two dollars, it would almost certainly be the case that some other commodity—say cotton—had fallen in price from fifteen cents to, perhaps, ten cents per pound. We should then find ourselves in the predicament of dealing with a dollar which, during a given interval, had risen in value with respect to cotton and had fallen in value with respect to wheat. It is quite clear, of course, that if the concept of value as attaching to the dollar is to have any real significance, the value of the dollar could not possibly rise and fall at the same time. As a matter of fact, in the illustration chosen, the change in the prices of wheat and cotton probably represented changes in the real economic values of these two commodities in large part and little, if any, change in the value of the dollar.

Money represents *generalized purchasing power*, and changes in its value can be indicated only by changes in its ability to command goods in general in exchange, and not by its ability to command varying amounts of any particular good or group of goods. If the prices of a wide variety of goods and services are tabulated at the beginning of a certain period and again at the end, it will be found invariably that

some prices have moved upward, some downward, and some, probably, have not changed at all. If it is found that the prices that have advanced are those of widely used and important goods, and that the number of price advances is greater than the number of declines, we may be safe in assuming that the value of money has declined, since each dollar is capable of purchasing a smaller quantity of goods in general than at the beginning of the period. In other words, if the average of all these prices has advanced, we might be justified in saying that the value of money has fallen.

Relative and absolute changes in the value of money.—

But even this idea of changes in the value of money is not entirely satisfactory. A situation might easily be conceived in which the productivity of a given country is on the decrease, so that there is a growing scarcity of goods. If the money stock of the country in question remained unchanged (relatively to population) during such a period of decreasing productivity, prices would naturally tend to rise all along the line, with the result that the general run or level of prices would be higher at the end of the period than at the beginning. Would it then be proper to say that the value of money had fallen? Or has the value of money remained the same, absolutely, while the values of economic goods in general have increased? The author is inclined to answer the first of these questions in the negative and the second in the affirmative, on the ground that the basis for the change in the price level lay entirely with the changes that had occurred in the economic values of a wide range of goods, and not at all with any change in the value of money itself. Stated somewhat differently, the upward trend of prices is necessary to represent the changes that have occurred in the values of goods—changes that have unquestionably taken place—and, therefore, such a trend of prices is necessary to depict the real economic situation. This attitude will be objected to strongly by those who assert that money has no absolute value apart from its value in exchange. The value of an economic good, however, is not merely relative to that of other economic goods. This can be shown by supposing a

situation in which but one economic good exists. If this good satisfies a want and is scarce, it will have economic value despite the fact that there is no other good in terms of which its value can be measured. Similar reasoning might be applied to the value of money, considered in an absolute sense. That is, we might quite reasonably say that if the quantity of money is kept stable in relation to population, the value of the money unit would remain stable and changes in the price level, or average of prices of goods and services, would indicate changes in the values of those goods and services, not in the value of money.

The value of money considered as its exchange value in this book.—In spite of the considerations brought out in the preceding paragraph, it will be noted that the value of money was defined as its ability to command other goods and services in exchange. The justification of this definition lies in the fact that in the practical application of some system of measurement of changes in the value of money, it is impossible to draw any distinction between changes in purchasing power that arise from alterations in the values of goods and those that arise from real changes in the value of money. Practically, the purchasing power of the dollar—its command over economic goods in general—rises, falls, or remains stationary, regardless of the forces that have brought about these results. It therefore seems expedient to recognize all changes in purchasing power as changes in the value of money. At the same time, it will not do to forget the fact that such changes may result from forces that are brought about by variations in the general productivity of the country as well as from forces that originate entirely on the money side. If we are to take an intelligent attitude on money affairs, it is certainly as important to know *why* a given change has occurred as to know what the extent of that change has amounted to. One subtle theorist¹ has termed the changes in the general purchasing power of money that result from changes in productivity *relative* changes in the value of money, while those resulting from conditions affecting the money itself are termed *absolute* value changes; and this is a distinction it will be well to bear in mind.

¹ Taylor, *Some Chapters on Money*, Chapter VI.

THE MEASUREMENT OF CHANGES IN THE
VALUE OF MONEY

Price index numbers.—Since, for practical purposes, we shall consider all changes in the purchasing power of money, whether relative or absolute, as changes in its value, it is pertinent to inquire how these variations are to be measured. The answer is by means of index numbers of the general level of prices. Any detailed discussion of the mechanics of index number construction is outside the scope of this work. However, some general observations on the nature and application of price indexes seem desirable in the present connection.

*Price index numbers are series of abstract numbers that express the relative changes in the magnitude of statistical averages or aggregates of prices.*² To explain more fully, if we take a statistical average—such as the arithmetic mean, geometric mean or median—of a group of prices in a given year and call that the base, usually designating it as 100, and then obtain a similar average of prices of the same items for a later date, we can determine the relative change in that average of prices at the later date as compared with the base period. Or we may add the prices together and term the sum 100 for the base year and compare it with the aggregate or sum of the prices of the same commodities at a later (or earlier) date.

When an average, such as the arithmetic mean, is used, it is common practice to set each price in the base year equal to 100 and then obtain the relative increase or decrease in each price for the date for which the index number is being computed. These relatives are then averaged to obtain the index number for the latter date, as shown in the very simple example below:

(1)	(2)	(3)	(4)	(5)	(6)
		Price	Relative	Price	Relative
Commodity	Unit	1910	1910	1911	1911
Corn	bu.	\$.480	100	\$.618	129
Cotton	lb.	.141	100	.088	62.5
Hay	ton	12.140	100	14.290	117.5
Wheat	bu.	.883	100	.874	99
			4)400		4)408

² This definition is adapted from a general definition of index numbers as given by A. A. Young in a *Handbook of Mathematical Statistics* (Boston, 1924), p. 181.

On the other hand, if an aggregate of prices is used, the prices of corn, cotton, hay, and wheat in 1910 are added together, the sum being \$13.644. The sum of the 1911 prices is \$15.870. Setting the 1910 aggregate equal to 100, the index number for 1911 is found to be 116 (\$13.644: \$15.870::100:116).

Both the index numbers illustrated above are unweighted; that is, all commodities are treated as of the same importance. Also, in the case of the unweighted aggregate of actual prices the variety of units used—bushels, pounds, and tons—distorts the result. This objection could be overcome by reducing all units to pounds, but, even then, the diversity in importance of the commodities included leads to unsatisfactory results. In order to remedy this drawback, it is necessary to introduce weights in the calculation of a satisfactory price index number.

Weighted price indexes.—In illustrating the nature of weighted price index numbers, a single example will suffice. As a matter of practice, the important price indexes, from the point of view of the measurement of the value of money, are weighted indexes of price aggregates. Consequently, an example of the weighted aggregate of actual prices will be sufficient for our purposes. The weights ordinarily used consist of the amounts of the various goods produced, or marketed, in the base, or some later, period. Using the same commodities and prices as in the previous example, but introducing as weights the quantities produced in the base year (1910), the index number of our four farm commodity prices would be calculated as follows:

(1) <i>Com- modity</i>	(2) <i>Unit</i>	(3) <i>Weight- millions of units</i>	(4) <i>1910 Price</i>	(5) <i>1910 Price x wt.</i>	(6) <i>1911 Price</i>	(7) <i>1911 Price x wt.</i>
Corn	bu.	2,886	\$.480	\$1,385,280,000	\$.618	\$1,783,548,000
Cotton	lb.	5,805	.141	818,505,000	.088	510,840,000
Hay	ton	69	12.140	842,273,200	14.290	991,440,200
Wheat	bu.	635	.883	560,793,300	.874	555,077,400
				<u>\$3,606,851,500</u>		<u>\$3,840,905,600</u>

$$\$3,606,851,500 : \$3,840,905,600 :: 100 : 106.5$$

What has really been compared here is the total cost of our selected bill of goods in 1910 with the total cost of the same

bill of goods in 1911. This gives a satisfactory indication of changes in the purchasing power of money over the particular bill of goods in the index.

Having now given some brief indication of the methods by which index numbers of prices are constructed, we shall proceed to a concise description of the various price indexes currently published in the United States with a view to discovering how adequately they perform the function of measuring changes in the value of money.

Current price indexes in the United States.—Until recently, the nearest approach to an index number showing changes in the value of the dollar was the general purpose index of wholesale prices, published monthly by the Bureau of Labor Statistics. This index number, which has recently been revised, is now computed from approximately 900 price series. The index is calculated by taking an aggregate of the included price series weighted by the average of the quantities produced. This aggregate is then expressed as a percentage of the aggregate for the base year, which is now 1926. This index number is satisfactory as regards its technical construction and does show accurately the movements of the level of wholesale commodity prices in the United States. More specifically, it shows changes in the cost at wholesale of a group of widely assorted commodities at monthly intervals. The Bureau of Labor Statistics also publishes a weekly index of wholesale prices and a daily index. Other wholesale price indexes are also published, but the B. of L. S. index is of outstanding importance.

Aside from its wholesale price indexes, the Bureau of Labor Statistics publishes a retail food price index for 51 cities and a cost of living index based on cost of goods purchased by wage earners and lower-salaried workers in large cities. Both are computed on a 1935-1939 base. The National Industrial Conference Board also computes and publishes a cost-of-living index monthly.

The index numbers noted above cover a fairly comprehensive list of price quotations. Others, such as Moody's daily index of staple commodity prices and the Guaranty Trust Company's index of 25 commodity prices at wholesale, are much less comprehensive in scope. These are much more

sensitive than the Bureau of Labor Statistics wholesale price index. Finally, there are available many indexes of security prices, among which those of Dow, Jones and Company may be noted.

General purpose numbers and changes in the value of money.—Presumably, the distinction to be drawn between general and special purpose price index numbers is that the latter are meant to show variations in specific groups of prices only, while the former, being more inclusive, are supposed to indicate differences in the general level of prices at different dates, i.e., to measure changes in the value of money. As a matter of fact, this is the distinction that is generally made, and businessmen and students alike ordinarily consider a rise or fall in the Bureau's wholesale price indexes as recording a decline or increase in the value of money. This attitude is of questionable validity. After all, these index numbers are, in a sense, also special purpose numbers. They record changes in the general wholesale price level of physical commodities, but this is all. They do not show changes in retail prices, the level of which apparently changes both less rapidly and in less degree than that of wholesale prices. They take no account of wages, the price of labor. They are not influenced by variations in urban house rents. In fact, there are many important elements in the entire price system that are not included in these so-called general purpose index numbers, and it by no means necessarily follows, because wholesale prices are rising or falling, that these other price elements are moving in the same direction or with the same intensity.

A measure of the general level of prices.—Early in 1926, the Federal Reserve Bank of New York, in its *Monthly Review of Credit and Business Conditions*, began to publish a composite index of the general price level that met many of the objections cited in the preceding paragraph. This index was compiled under the direction of Carl Snyder and will be referred to from now on as Snyder's index. As first published in the *Review*, this index included wholesale commodity prices, wages, cost of living, and rents. Commodity prices were given a weight of 2; wage payments (including unskilled labor, clerks, and teachers), $3\frac{1}{2}$; cost

of living, $3\frac{1}{2}$; and rents, 1.³ The chief criticism seemed to be that since Snyder had run the index back to the year 1875 there was chance for doubt concerning the completeness of the data used for the earlier years, while the weight given to each element in the index may seem questionable.⁴ In 1927, this index was revised back to 1913, and represented a more complete and accurate estimate of the general price level than would have been possible to obtain a comparatively few years earlier. The revised index⁵ includes twelve price groups with weights as follows:

	<i>Weight</i>
1. Industrial commodity prices at wholesale	10
2. Farm prices at the farm	10
3. Retail food prices	10
4. Rents	5
5. Other cost-of-living items	10
6. Transportation cost	5
7. Realty values	10
8. Security prices	10
9. Equipment and machinery prices	10
10. Hardware prices	3
11. Automobile prices	2
12. Composite wages	15

Clearly, such an index is bound to furnish a better measure of changes in the value of money than any index computed from wholesale commodity prices alone. A comparison of the movements of the wholesale commodity price level and the general price level from 1887 to 1939 is shown in Chart 10.⁶

The best measure of the value of money.—It is a simple matter to state that the value of money is equivalent to its purchasing power over goods and services in general, yet the problem of obtaining a satisfactory index number to measure changes in the purchasing power of money is difficult. Objections to the use of wholesale commodity indexes for this purpose have been given and it was indicated in the preceding paragraph that Snyder's index

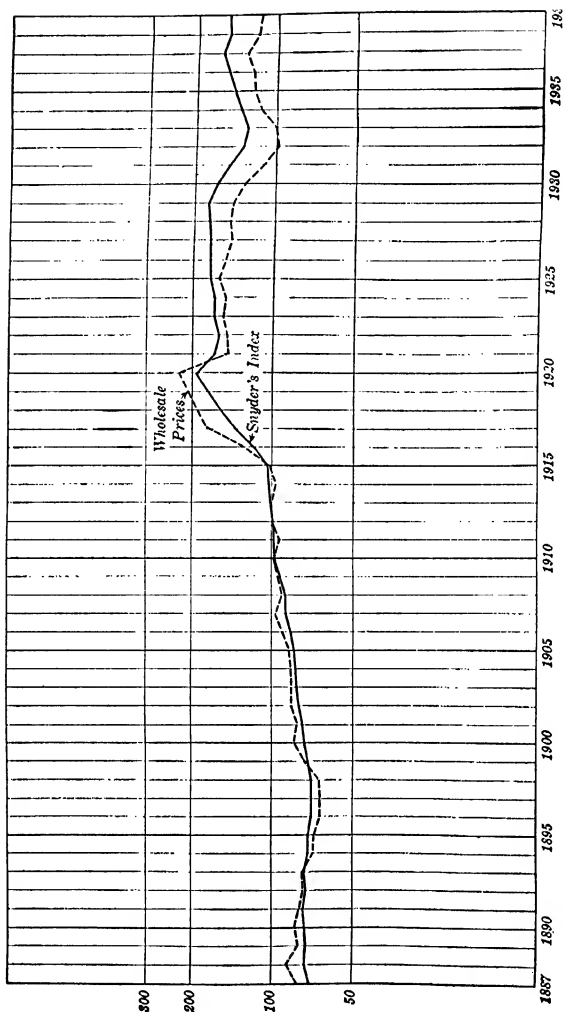
³ Snyder, *Business Cycles and Business Measurements*, p. 135-38.

⁴ Compare Mitchell, *Business Cycles, New Edition*, p. 305.

⁵ For a complete discussion of this index, see Snyder's article in the *Review of Economic Statistics*, February 1928, pp. 40-52.

⁶ Unfortunately, computation of this index was discontinued at the end of 1939.

CHART 10. SNYDER'S INDEX OF THE GENERAL PRICE LEVEL AND THE
WHOLESALE COMMODITY PRICE LEVEL (B. L. S.). 1887-1939



Sources. Snyder's Index. *Business Cycles and Business Measurements*, 1887-1943, p. 286. *Review of Economic Statistics*, Feb., 1928, 1913-1927, p. 49. *Wholesale Prices*, Bureau of Labor Statistics.

constituted a more satisfactory measure than the wholesale index numbers. Even Snyder's index, however, was not entirely satisfactory, chiefly because it included the prices of investments, such as security prices and realty values. Although items of this sort are purchased with money, it is more reasonable to confine the definition of the value of money to its purchasing power over goods and services, not over future income. That is, the proper measure should be in the nature of a consumption index. For this reason, the late Lord Keynes, the brilliant English economist, preferred Snyder's earlier or unrevised index to the revised one as a measure of changes in the value of money.⁷

Under the circumstances, it might be thought that a cost of living index of the type already described would be most suitable for measuring changes in money value. Such indexes, however, as at present constructed, do not cover a wide enough range of prices to be highly satisfactory. In spite of this, it is interesting to note that the movement of the Bureau of Labor index of the cost of living followed that of Snyder's revised index very closely from 1922 through 1927. After 1927, on the other hand, the extreme fluctuations in security prices caused Snyder's index to move through a wider amplitude than did the index of the cost of living.

Conclusion.—The foregoing remarks are not to be construed as a criticism of such index numbers as those of the Bureau of Labor Statistics. They are excellent indexes and serve very useful purposes. It is an extremely desirable thing to know whether commodity prices are rising or falling, and these indexes show this satisfactorily as regards wholesale prices. The objection is to the assumption that changes in these index numbers measure at all accurately alterations in the value of money. To hold that they do is only somewhat less absurd than to claim that a rise or fall in the prices of agricultural commodities, or of wheat alone, shows a decline or increase in the value of money. Although less extreme, the absurdity is still there. A decline in com-

⁷ See J. M. Keynes, *A Treatise on Money*, I, 53 ff. Mr. Keynes, however, emphasizes the fact that Mr. Snyder's aim was an index number of all cash transactions, and that, for that purpose, the revised index was superior to the old one.

modity prices may be offset, wholly or in part, by higher wages, or higher house rents. The student should realize the value of price index numbers of all sorts, but he should also have a full realization of just what the various indexes that are available do, in fact, measure.

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CHAPTER 25

THE DETERMINATION OF THE VALUE OF MONEY

Introduction.—We are now in a position to turn our attention to the question of the manner in which the value of money is determined. Since the problem is one of great difficulty, it will be well to attack it by degrees, ruling out, for the present, what we may call abnormal situations such as those that prevailed during and after World Wars I and II, and concentrating our attention on the analysis of the problem under relatively stable conditions.

Superficially, it is correct to say that the value of money, like the value of any economic good, is determined by the demand for it in relation to the supply or quantity of it. Since, however, the conditions governing the supply of and demand for money are different from those that apply in the case of other economic goods, it will be necessary to study the forces governing both of these factors before we shall be able to arrive at any definite conclusions.

Three approaches to the problem.—The problem of the determination of the value of money may be approached from three different angles. The first of these may be called the “cash-spending” or “cash-transactions” approach. The second is generally referred to as the “cash-balance” approach, while the third is known as the “income” approach. The cash-spending approach is the one that was generally followed in earlier years by American monetary theorists, while the cash-balance approach was more popular with English students of money. More recently, the income approach, following and elaborating the theories of the late Lord Keynes, has become increasingly popular on both sides of the Atlantic. All three of these approaches have merit and it will be advisable to examine each one of them in some detail.

The cash-spending approach.—In this approach to the problem of the value of money it is, as the name implies, the spending of money that is emphasized. The utility of money, it is claimed, lies solely in its ability to command goods and services in exchange, not in any inherent capacity to satisfy a want. This being so, we may be quite certain that the entire quantity of money in the hands of the people will be offered regularly on the market for goods and services. Money not being wanted in itself thus differs from other goods that are themselves capable of satisfying wants. Money is not demanded, then, in the sense that goods and services are demanded. The people will take any amount that they can obtain, but it will all be spent on goods and services (including investments) and its value will therefore vary in exact proportion to changes in the quantity. Like any other economic good, the value of money varies inversely as the quantity, given the conditions of demand, but it differs from other economic goods in that the variations are in proportion to changes in the supply of money.

In these circumstances, it is apparent that the value of a country's money is equal to the value of the goods obtained in exchange for it. Over a given period of time, as a year, however, the money will change hands a number of times in exchange for various goods and services. The value of the country's money, then, will be equal to the value of goods and services obtained in exchange divided by the average number of times that the stock of money changes hands for business purposes throughout the year.

The equation of exchange.—This relationship may be made clearer by the use of symbols. If we call the total value of the country's money M , and its average turnover or velocity of circulation, v , and the total amount of money transactions, T , then

$$M = T/v$$

If there are n units of money, then the value or purchasing power of each unit, p , will be equal to M/n . Then, dividing our first equation through by n , we have

$$M/n = T/nv$$

Substituting p for M/n ,

$$p = T/nv$$

This gives us an algebraic expression that is known as the equation of exchange. The purchasing power of the money unit, p , however, is the inverse of the price level (a higher price level meaning that less goods can be purchased for a unit of money and vice versa), and since, in practice, we measure changes in the value of money by means of index numbers of the price level, it will be advisable to invert our equation in order to obtain the price level in place of the purchasing power of the money unit on the left side of the equation. If we call the general level of prices, P , then

$$P = nv/T(i)$$

In this equation, T represents the vast aggregate of goods, services, and securities that have been exchanged for money over the period of a year. Some of the goods composing T will have changed hands more than once, but these exchanges all constitute part of the total business transactions for the year and so are included in the aggregate that is represented by T . Since the number of units of money, n , is not so great as the number of business transactions, T , each unit of money will change hands a number of times in the course of the year, and the average number of times that all of the units of money change hands is indicated in the equation by v , and is usually termed the velocity of circulation of money. P represents the sum of all of the prices of the components of T and may be considered as an index number of the general price level of all money transactions.

The demand for money.—In the cash-spending approach to the problem of the value of money the demand for money is thought of as dependent on the volume of transactions, T ; i.e., the goods, services, and securities coming onto the market and exchanged for money. If this demand remains constant, the value of the money unit will vary inversely and proportionally as the quantity of money; or, to state the matter in terms of our final equation, the general price level, P , will vary directly and proportionally as the amount of

money, n . This assumes, of course, that v does not vary independently of T , but if we accept the reasoning that money is wanted only to spend, this assumption is adequately justified.

As a matter of fact, the demand for money, understood as T , does not remain constant, but rather tends to increase over a period of years in a progressive country. Nevertheless, the complexity of economic phenomena has made necessary the assumption of practically static conditions in working out economic laws and principles. We may grant, therefore, the legitimacy of the assumption that T remains constant for the purpose of determining the value of money. This would mean that, in practice, allowance would have to be made for increases in population and productivity in trying to determine the effect of changes in the quantity of money on its value.

Leaving a critical estimate of the value of this method of attacking the problem to a later point, we shall next turn our attention to the approach of the cash-balance theorists.

The cash-balance approach.—In approaching the problem of the value of money from the cash-balance viewpoint, emphasis is placed on the amount of money that is held, rather than on the amount spent. It is apparent that each individual in any given country holds a certain portion of his income or resources in the form of money at all times. What proportion of his income is so held depends partly upon the individual and partly on the habits and customs of the country, factors that will be discussed later. For the present, it may be noted merely that the value of the money held by each individual is equal to the value of the goods and services that he gives up in order to hold the amount of money that he keeps, on the average, in his possession. The total value of the money stock will then be equal to the value of the sum of all the individual balances held.

Thus, if the people of a country hold, on the average, a proportion of their real incomes equal to k in the form of money, and if the total annual real income of the country is equal to R , and the value of the country's money to M , then

$$M = kR$$

If, as before, we call the number of units of money n , then the value of each unit, p , would be M/n . Dividing both sides of the equation through by n , we have

$$M/n = kR/n$$

Substituting p for M/n ,

$$p = kR/n$$

Or,

$$P = n/kR \text{ (ii)}$$

where P is the price level, which is the inverse of p .

In this equation, so long as kR remains constant, P will vary directly and proportionally as n . If the people of the country insist on holding in the form of money only a sufficient amount of purchasing power to obtain a fixed amount of R , then the proportion of R held as money will decrease as R increases, and variations in P will be directly proportional to changes in the quantity of money, n . If, on the other hand, the public insists on holding a fixed proportion of its real income in the form of money, an increase in R will result in a corresponding increase in kR , and, barring any change in the quantity of money, P will tend to decline.

The demand for money.—Looked at from the cash-balance standpoint, the demand for money is found to consist of the stocks of money that the people of a country decide to hold and is dependent on the amount of goods and services that are foregone in order to retain this amount of money in their possession. Although this notion may at first seem confusing, it has the distinct advantage of linking up the nature of the demand for money with that of the demand for other economic goods. The demand for money is determined by the desire of the people to hold stocks of money as such. It will be worth our while to consider the forces that determine the size of these stocks.

In the first place, it is usually necessary to hold a certain amount of money to care for the regularly recurring monetary transactions in which individuals must participate. A laborer who is paid \$25 a week may spend the entire amount

of his weekly income on goods or services, but it will be ordinarily spent in more or less regular fashion throughout the week. His stock of money will accordingly vary from \$25 at the beginning of the week to 0 at the end, but it will average somewhere near \$12.50 for the entire week. A business or professional man who receives his income by the month or quarter will of course be likely to hold a larger amount of money on the average than the laborer who is paid by the week, since the former's income is likely to be larger and his payments will be spread out over a longer period.

A second reason for holding money is to be able to meet contingencies that may arise, such as unexpected expenses in the way of doctor bills incurred through sudden sickness, and also opportunities to buy something at a bargain or to purchase some unusual and highly-prized object that appears suddenly in the market and that must be paid for in cash.

Finally, money may be held for future investment, being accumulated a bit at a time until a sufficient amount is at hand to purchase a share of stock or a bond or to make a sizeable deposit in the savings banks. There are also, in nearly every country, people who distrust savings banks and investments and who accumulate money as a store of value to be used in old age, or to be left to their children.

The amount of money that is held for the two last-mentioned purposes depends largely upon the characteristics and state of mind of the individual. It will quite obviously be larger for the cautious and thrifty than for those who spend their income as they receive it without thought for the future. The amount held for the first reason, on the other hand, chiefly depends upon the habits and customs of the country. If laborers are paid by the month, receiving a wage of \$100, and expend their wages regularly throughout the month, they will, on the average, hold \$50 each as opposed to an average holding of \$12.50 when paid by the week. If it is the custom to buy goods on credit, paying for them at the beginning of the following month and thus utilizing most of that month's money income, the amount of money held will be greatly decreased. Other illustrations

could be found to show the effect of habit and custom on the demand for money to hold, but these are sufficient for our purposes.

To sum up, each individual receiving a money income decides just how much of that income shall be held in the form of money and how much shall be expended for goods. The holding of money has certain advantages, as has been shown, which must be weighed against the disadvantages of foregoing the use of the goods that the money held would buy. Presumably, each individual arrives at a decision as to the amount of his income it is worth while to hold as money, and his marginal demand for money would be determined by the significance of that unit of money which he finds it just worth his while to hold instead of spending it for goods.

The country's demand for money, under this view, would be equal to the sum of individual demands and would be dependent on the goods and services foregone in order to maintain the stock of money that the public desires to hold. Obviously, where the demand for money to hold on the part of individuals generally is large, a larger stock of money will have to be maintained than would be the case in a country the inhabitants of which had small desire to hold any great part of their incomes in the form of money.

Relation between the two approaches.—The cash-spending and the cash-balance approaches to the problem of the value of money really form two ways of looking at the same thing. If k , in the cash-balance equation, is equal to $1/10$, it is clear that the stock of money changes hands more frequently than if k is $1/2$. In fact, k is nothing more nor less than our old friend v standing on its head. That is, $v = 1/k$. Written in the form of the cash-spending equation, the equation obtained in the cash-balance approach (ii) would be

$$P = nv/R \text{ (iii)}$$

which shows a distinct family resemblance to our first equation (i) except that T appeared there in place of R . This, however, is an important difference, for the price level of equation (i) is the price level of all cash transactions, while the price level of equations (ii) or (iii) is the income price level. As a matter of fact, P in equations (ii) and (iii) more

nearly approaches the type of index best suited to measure changes in the value of money than does the cash transactions price index of equation (i); but this is a criticism of the factors used in equation (i) rather than of the method of approach to the problem. If R is substituted in place of T , as in equation (iii), the factor v would be much smaller than in equation (i), for the income velocity of money is naturally slower than its transaction velocity. For reasons that will appear presently, it will be clear that income velocity is more important than transaction velocity in determining causes of changes in the value of money.

Variations in the normal value of money.—The relations between money and goods, which have been brought out in the preceding paragraphs, have led to the formulation of a principle regarding the value of money as follows: *Other conditions remaining the same, the value of money varies inversely and proportionally as the quantity.* This is the so-called quantity theory of money, and may be approached, as has been indicated, from either the cash-spending or the cash-holding standpoint. As has also been indicated, in order to warrant the emphasis that the principle places on the quantity of money, it is necessary that the “other conditions” should be moderately stable.

In passing judgment on the validity of the quantity theory, it must be remembered that it is a theory of the normal value of money. By the normal value of money we mean *the value that is always tending to prevail during a given period as a result of the action of those forces that operate throughout the period*, especially the larger of those forces. But though always tending to prevail, we should note that, because of the influence of temporary forces, *the normal value of money seldom if ever does prevail*.¹ Looked at from this point of view, the theory offers a sound explanation of changes in the value of money. The volume of transactions or the annual real income, whichever is used, does tend to increase over a period of years, it is true, but the increase tends to take place at a regular rate and can be allowed for. The other possible variable, v or k (depending upon the

¹ Adapted from F. M. Taylor's definition of normal price. *Principles of Economics*, p. 299.

approach), tends to be constant. Money is, after all, acquired to be spent and will be spent in the course of time. A change in the habits or customs of the people may, of course, occur and may permanently influence k or v , but, generally speaking, they tend to remain fixed for long periods of time without great alteration.

Our final conclusion, then, must be that the quantity theory, looked at as a theory of normal value, is sound and that it is useful in explaining long-term tendencies in the variation of the purchasing power of money.²

Short-term fluctuations in the value of money.—The quantity theory, as stated in the preceding section, was never intended to apply to short-term changes in the value of money. The fact that it has often been used in connection with short-run changes in the price level is the fault, not of the theory itself, but of those who have been responsible for its misapplication.³ Yet, in spite of this, the short-term changes in the value of money are often of paramount importance. It is accordingly essential to explain these changes in some sort of satisfactory fashion.

In analyzing short-term changes in the price level, it is still possible to use the equation of exchange for purposes of illustration.⁴ We shall find, however, that the cash-balance equation, $P=n/kR$, is more satisfactory than the cash-spending equation for this purpose, since it concentrates attention on balances held in the form of money.

Short-term changes in cash balances.—Although it is true that, given the habits and customs of the people of a country, the amount of cash-balances held by the people, i.e., their

² For attempts at statistical verification of the quantity theory, see studies by Professor Gustav Cassel and Mr. Joseph Kitchin, *First Interim Report of the Gold Delegation*, Annexes X and XI, League of Nations, Geneva 1930; and L. C. Wilcoxon, "World Prices and the Precious Metals," *Journal of the American Statistical Association*, XXVII, 129-40. See also an article by the author, "Some Aspects of the Stable Money Question," *Quarterly Journal of Economics*, XLIII, 684 ff.

³ Professor Fisher, in *The Purchasing Power of Money*, made quite clear the fact that the quantity principle applied to normal value of money; in some of his more popular works, however, e.g., *Stabilizing the Dollar*, he seems to have overlooked this qualification of the theory to a large extent.

⁴ The equation of exchange is often wrongly confused with the quantity theory of money; e.g., see C. Whitney, "The Equation of Exchange and the Price Stabilization Problem," *American Economic Review*, XXII, p. 235. It should be obvious that the algebraic expression of a truism is not identical with a theory that attempts to explain the cause of changes in the value of money.

demand for money to hold, tends to be constant, since the ultimate purpose of money is to acquire goods and services in exchange, nevertheless, over short periods of time, this demand may fluctuate considerably. It is quite possible that fear, uncertainty over the economic outlook, or some other factor, may result in people's increasing the proportion of their incomes that they hold in money. In other words, for the time being, they may prefer money to other goods or investments, and hence may refrain from spending as large a proportion of their money incomes as usual. In such circumstances, there is an increase in the demand schedule for money, more money being wanted at every value than before, and the effect of this increase in demand will be a fall in the price level.

An increase in the demand for money of this sort occurred in the United States in 1931. Many individuals increased materially the proportion of their incomes and property that they held in the form of money, as evidenced by the statistical data on money in circulation (an undoubted misnomer since the money was most decidedly not circulating) and by the anti-hoarding campaigns of the administration and others.

The manner in which an increase in the demand for money to hold brings about a decline in the price level may be made clear by a simple example. Assume a community that uses only hand-to-hand money and that has a fixed money stock. The people are engaged in producing goods and selling them to others, each individual's product being sold for money and furnishing him with the purchasing power to buy the product of others. So long as the money received by individuals is used regularly to purchase the products of others, the economic machine will run smoothly enough. Assume, however, that a considerable number of the people of the community, having sold their products or services for money, proceed to hold that money, or a large part of it, instead of spending it. Obviously, the people with the products that these hoarders have been in the habit of buying will be confronted with an unpleasant prospect. They have the goods ready to sell, but the market for these goods has largely disappeared. What are they to do? Clearly, they must try

to persuade the hoarders to loosen their purse strings and purchase the goods offered. There is no better way to do this than to lower the prices of the goods to be disposed of, and this, in fact, is precisely what is done.

Even then the goods may not be sold readily. The hoarders, finding that they have the tradesmen on the defensive, put extra locks on their strongboxes and wait for the next move. The tradesmen, becoming desperate, reduce their prices still further in the hope of enticing buyers with bargains. This may keep up for some time, but eventually the tradesmen refuse to lower their prices any further, and the hoarders, confident that prices have finally reached rock bottom, cheerfully unlock their strongboxes and buy the goods at great advantage to themselves, and, incidentally, at the expense of the rest of the community. With an unusual and rather general decrease in the demand for money to hold, i.e., in cash-balances, the effects will be just the opposite of those here pictured. We shall have occasion to refer to such a situation in a later chapter.⁵

The velocity of circulation of money.—If we now shift from the cash-balance to the cash-spending approach, using the equation $P = nv/R$, it is obvious that changes in the demand for money to hold are identical with inverse changes in the velocity of circulation. Thus, an increase in demand of the sort described above would have the effect of decreasing v in the cash-spending equation. The result, as shown, is a decrease in P , and should require no further discussion. Certain monetary theorists, however, have insisted that a change in v has no power to bring about a change in P , since any change in the velocity of circulation of money is bound to be offset by a corresponding change in the velocity of circulation of the goods and services composing R .⁶ It is, of course, true that as v decreases R also decreases, if R is understood to be goods and services actually sold on the market for money. But if we consider R as consisting of goods and services that are produced for the market, to be sold eventually, of course, then it is clear that a decrease in v coming

⁵ Chapter 27.

⁶ See an excellent article by A. W. Marget, "The Relation between the Velocity of Circulation of Money and the 'Velocity of Circulation of Goods,'" *Journal of Political Economy*, XL, 289-313, and the references there cited.

at a particular time will leave traders and dealers with goods to be sold, but not yet sold, and will induce dealers to lower their prices in order to move their goods. The goods will be sold in the end, but, because of the lower prices, they may be disposed of without a corresponding increase in the velocity of circulation of the whole stock of money. This is so obviously what happens that it does not seem worth while to labor the point further.

Significance of "income velocity."—Before leaving this phase of the subject, it should be noted that what we have termed the income velocity of money is the important factor affecting the price level. That is, the rate at which individuals spend their money incomes for consumption or investment goods or for services is significant in determining the amounts and prices of such goods and services that can be profitably disposed of in the market. For, clearly, if any large part of the population increases its holding of cash, preferring cash to goods, this is going to result in a temporary partial cessation of the money demand for goods. The first effect of this will be a fall in the prices of goods already produced for the market, as already explained, but if the people with large cash-balances continue to spend little, even at the lower prices, production will be curtailed, and unemployment, with an accompanying further drop in the demand for goods, will ensue. Once this state of affairs has been reached, it is necessary for those with money stocks to spend them in order to revive the demand for goods and bring about an increase in productive activity.

Thus, although it is true that changes in the velocity of circulation of the money of manufacturers, financiers, and traders are not unimportant, such changes are apt to result from variations in income velocity circulation, since business men find a profitable market for their products only when the people of the country, as consumers and investors, are willing and able to buy these products at the prices at which they are offered.

The income approach.—Having now considered the "cash-spending" and "cash-balance" approaches to the problem of the value of money, we may turn our attention to the income approach. This approach tackles the problem from

the point of view of the money income of the community or country in relation to output, prices, employment, and interest rates—the latter being associated with the marginal efficiency of capital.⁷ Moreover, considerable emphasis is placed on the relation between the amount of income spent for consumption goods—as measured by the marginal propensity to consume—and the proportion not spent for consumption goods and hence available for investment.

To illustrate, suppose that an individual receives \$1000 in money income, of which he spends \$750 on consumption goods and saves and invests the remaining \$250. If everyone follows the same procedure, and actually invests the proportion of his income that is not spent for consumption goods (with the exception of a stable amount of money held as convenience and contingency balances), the amount of money income created by the production of consumption and investment goods will continue to be regular, and employment and prices will be largely unaffected.

This situation would actually prevail in a simple community where investment was undertaken directly by the income recipients. A farmer may decide that he needs a new hen house or a tractor. He saves a portion of his money income and with this saving comes into the market as a buyer of the new capital assets that he needs. The same would apply to a merchant who purchases a new delivery truck or a doctor who invests in a new X-ray machine. There is a money demand for these capital goods, which becomes effective in the market shortly after the saving of the farmer, the merchant, and the doctor has been affected.

In a more highly specialized economy, however, where to a considerable extent the process of investment is undertaken by a different group from those who do the saving, the situation is not so simple. Savings, which are considered as the amount of money income not expended for consumption goods, may not result in any reasonably quick subsequent demand for investment goods. The savings of an individual may be deposited in a savings bank, which is restricted in its investment activities to the purchase of high-grade bonds

⁷ The marginal efficiency of capital is the expected percentage return on the cost over the life of the capital good.

or the granting of real estate mortgage loans. If there is a demand for loans from house builders, the deposited savings may be loaned out and soon will appear in the market as demands for building materials, labor, etc. Or, if a bond issue (for new capital and not refunding) is available for purchase, a similar result will ensue. But if there is an insufficient demand for mortgage loans or if new capital issues are not available in the necessary volume to absorb the deposited savings, the bank will have to hold larger reserves or purchase existing mortgages or bonds.

As a matter of fact, a good share of the investment by individuals as well as by institutions consists of the purchase of existing securities. When this is the case, the savings of the individual are transferred to the seller of the securities. What he will do with the money he receives will depend on his reason for selling the securities that he had previously held. He may spend the money for consumption goods or he may think that the price of the security he has sold is going to go down and will hold the money for a time pending the expected price drop. Or he may invest in some other existing security, the price of which he expects to go up, in which case the money is transferred to the erstwhile holder of that security and the question of what he will do with it then comes into the picture.

It is clear that the common practice of investing in existing securities at best postpones the appearance on the market of a money demand for investment goods. If the liquidity preference of the sellers of these securities is high, they may hold the money received in the form of cash and the effect is the same as though the original recipient of the income had held his savings in the form of money income not expended for consumption goods. This increased holding of money will affect prices as explained earlier in the discussion of cash balances and the income velocity of circulation.

Another concept of the income approach theorists is that of the "investment multiplier." If there is an increase in the demand for investment goods, as a result of the "dishoarding" of funds previously held by individuals or of the creation and spending of new money for such goods, the effect of this demand will be to increase income and expenditure

for goods over a period of time through added employment in the capital goods industries, by several times the amount of the original increase in expenditure. The total expenditure that would result in relation to the original expenditure gives the figure referred to as the "multiplier." While attempts have been made to calculate this figure, there are so many possibilities of variation in the propensity to consume that an exactly calculated multiplier cannot be accepted as trustworthy. About all that can be safely accepted is that there is a multiplier effect of new investment expenditures, but this would apply equally to any expenditures resulting from the addition of new money or credit.⁸

Assuming that the demand for investment goods is unduly small, how can that demand be stimulated to the point where actual investment will absorb total savings? Keynes, for a time, heavily stressed the interest rate in this connection. If the market rate of interest coincided with the natural rate as determined by the marginal efficiency of capital, the demand for investment goods would absorb total savings. Of late, the emphasis of the income approach theorists seems to have shifted from the rate of interest, which is no longer held in such esteem, to the lack of a sufficient propensity to consume on the part of the public. In a mature economy, it is claimed, net investment will not be sufficient to absorb savings, since people tend habitually to save a certain portion of their incomes regardless of the rate of interest, so that the amount saved is more than the amount of new investment. The solution is either government expenditure on capital projects or the increase in the propensity to consume through a reduction in the inequality of individual incomes.

This is a controversial question that is not directly related to the value of money and need not be considered further here. Suffice it to state that, in the opinion of the author, private investment would find ample opportunities for absorbing savings if freed from onerous taxation and re-

⁸ In this connection see Professor Bratt's discussion of the multiplier in which he shows that the multiplier effect does not result only from investment expenditures from new money and credit (or dishoarded money) but from any type of expenditure that gets into income. Bratt, E. C., *Business Cycles and Forecasting*, (Chicago, 1948) pp 121-22.

strictions, which the government is in a position to remove if it saw fit.

As to the theory of the value of money, Keynes' own treatment of money and prices in *The General Theory* is somewhat sketchy. In his view, assuming homogeneous (interchangeable) productive units at fixed costs per unit, employment and output will increase with increased money supplies until full employment is reached. Thereafter, increases in money will increase prices and factor costs proportionally. A distinction is made, however, between whether the new money is added to some individual's income or gets into speculative balances as a result of money creation (bank credit expansion) for a non-income transaction. Even if new money gets into income, after the initial expenditures of the recipients, income will not be sufficiently high for the new money to be absorbed into ordinary convenience balances and speculative balances will increase.

The effect of the increase in these speculative balances on effective demand for goods will depend upon the schedules for liquidity preference and for the marginal efficiency of capital and on the investment multiplier, the latter being determined by the propensity to consume (the higher the marginal propensity to consume, the greater the investment multiplier).

Keynes proceeded, making allowance for the fact that unit productive costs are not in fact homogeneous, to indicate that prices may rise before full employment is reached. Many raw materials are increasing cost goods the supply of which can only be augmented at higher unit prices, and wages also tend to rise as productive activity of firms increases, so that prices may rise while employment is increasing but is not yet complete. Prices may also be pushed upward in the short run while full employment has not been attained as a result of the emergence of "bottlenecks" that will occur when certain widely needed goods are in short supply. Obviously, barring outside controls, the prices of such goods will have to rise to whatever point is necessary to divert part of the demands for them to other markets.

The advantage of the Keynesian or income approach over the other approaches previously considered is claimed to be

the increased realism of substituting the threefold schedule relationships (liquidity preference, marginal efficiency of capital, and propensity to consume) for the blanket v or k in the cash-spending or cash-balance analysis, as well as the important fact that movements in any one of these variables may induce shifts in the others.⁹

The advantage of the income approach, as described in the preceding paragraph, has considerable force if comparison is made with the other approaches, narrowly interpreted. It is true that the use of the so-called "quantity equations" has led some theorists to absurd and unrealistic conclusions. These equations represent a relationship that has actually resulted in a given period and may easily lead one astray if used to explain casual changes in prices as a result of changes in the factors on the right-hand side of the equation. The crude fallacy that changes in velocity cannot affect prices because changes in v and T cancel out is an example of this type of error. It is the expectations of producers and dealers of what the market prices of their goods will be that determines the amount of goods they will produce for the market. If these expectations are disappointed because of an increase in cash holdings on the part of consumers, they will have to sell at lower prices and the commodity price level will fall.¹⁰ To the extent that the exponents of the income approach have focussed attention on the importance of expectations in relation to realizations in attacking the problem of money and prices they have made a real contribution.

The objection, sometimes put forward, that the older approaches require the assumption of too many constants in the equation of exchange, whereas the income approach allows for the interaction of a number of variables, is scarcely justified. The quantity theorist does assume a *tendency* toward a constant velocity in the long run, but even then the tendency of T or R to increase (or possibly decrease) in the long run must be recognized. In the short run, on the

⁹ For a well-balanced and able appraisal of Keynes' theory from the standpoint of a Keynesian supporter, see the excellent chapter by John Lintner (Chapter XXXVII) in *The New Economics*.

¹⁰ Keynes himself apparently fell into a similar error in using an equation showing the calculation of the multiplier. See Saulnier, R. J., *Contemporary Monetary Theory*, pp. 333-36.

other hand, changes in velocity or cash balances and in T or R must be recognized as important in their interacting effect on prices.

The major contribution of the adherents of the income approach is, then, the placing of a highly desirable emphasis on factors that had hitherto been recognized but had not, perhaps, been given adequate attention. Through the concentration on the relation between the consumption and investment functions, the holding of balances for different purposes and the other factors described above, this approach provides a useful supplement to or extension of the cash-balance approach and is particularly appropriate in connection with the analysis of problems affecting short-run changes in the value of money.

Factors determining the supply of money.—Up to this point the discussion has revolved around the demand for money and the extent to which this demand may properly be considered as constant, and it has been shown that it tends toward constancy in the long run. Changes in the normal value of money are accordingly closely connected with variations in the quantity of money available, allowance being made for the long-term tendency of productivity to increase. This being so, it is necessary to turn our attention to those factors that determine, or limit, the volume of money.

Simple conditions assumed.—There are so many factors affecting the supply of money under modern conditions that it will require several chapters to discuss them all in detail. Here, we shall consider the question under the simplest conditions by assuming an isolated country without any banks and using a gold currency only. The gold coins in use, moreover, are, we shall suppose, freely and gratuitously struck at the mint and no restriction is placed on the melting of coins in order to obtain bullion for use in the arts. It will also be necessary that gold be produced within the boundaries of our hypothetical state, since we have assumed the country to be isolated.

In these circumstances, given the conditions of demand for money, its value will tend to be equal to the marginal cost of producing gold. But gold, being a commodity, is used in

industry and the arts, besides serving as a medium of exchange, and we have only assumed constancy in the demand for money, not in the demand for gold in all uses. Before discussing the cost of production of gold, therefore, it will be necessary to consider the influence of the non-monetary uses of gold on the demand for it.

The demand for money and the demand for gold.—If gold were used for monetary purposes only its value would be determined by its marginal significance (i.e., the significance of the last unit that the people felt it just worth while to hold as money) and its marginal cost of production (i.e., the cost of producing the last unit that it was just profitable to produce). Since gold is used for non-monetary purposes, however, it has a joint demand. The first unit of gold would be put to its most important use, whether monetary or otherwise, and subsequent units would be put to this same use until it became desirable to divert additional gold to some other purpose rather than putting any more of it to its first use. Clearly, however, as long as gold could be transferred from one use to another, the utility of the marginal unit of gold in each use would be the same, for if the marginal utility or significance of gold devoted to one purpose became greater than its marginal significance for another purpose, gold would be diverted from the latter to the former use until the marginal significance was the same in both instances.

Accordingly, as long as gold is freely and gratuitously coined and may be freely melted for use in non-monetary lines, there will be no more than a temporary divergence of the marginal significance of money from the marginal significance of gold in other uses. It is correct to say, therefore, that the value of money, under the assumed conditions, is determined by the marginal significance of money and the marginal cost of producing gold.

The cost of production of gold.—In practice, gold is obtained either from placers or from gold-bearing ore. Placer gold is found in nuggets or particles in alluvial or glacial deposits, and, once a placer is discovered, such gold as it contains may be obtained with comparatively little effort. In other words, there is relatively little, if any, relation between the cost of production of placer gold and the quan-

tity obtained. A rich placer will yield a large volume of gold with little effort; a poor placer may not yield enough to cover the cost of living of the prospector who is working it.

The mining of gold from ore, on the other hand, is done on a strict cost basis, and the gold so obtained is in the nature of an increasing-cost good. Some gold can be produced at a relatively low cost per unit; but, since added units can be obtained only by sinking shafts to lower and more expensive levels, or by refining poorer grades of ore, any marked increase in production involves increased costs per unit. It should be remembered, of course, that this tendency toward increasing costs may be offset by the introduction of new and more efficient methods of mining or refining the ore, as well as by the discovery of new rich mines. Given the conditions of production, however, the production of gold can be increased only at an increasing cost per unit of output.

Although many of the earlier important gold discoveries were of a fortuitous nature, the great bulk of the gold produced at present is mined from ore on a strict cost basis. We shall assume that the gold produced in our hypothetical country is mined from ore and is hence a typical increasing-cost product.

The selling price of gold.—If the business of gold mining is to be profitable, the price at which the gold is sold must cover the expenses of labor, materials, etc., used in the mining, and allow a margin in addition for profit. In a country on a full gold standard, however, the price of gold is fixed by the law and remains unchanged at all times. Consequently, if the money costs of mining gold increase, the selling price remaining fixed, the margin of profit decreases. This means that the marginal mines or levels, the ones that were just making a profit before costs increased, will become unprofitable and will be shut down, thereby decreasing the output of gold. In the opposite fashion, a decrease in money costs of production will increase the margin of profit and result in an increase in the production of gold.

But changes in the money costs of production of gold tend to vary inversely with changes in the value or purchasing power of money; for if the price level rises, i.e., the value of money decreases, labor and material costs will tend to go

up, and gold production will tend to decrease; whereas, if the price level falls, the result will be just the opposite. If variations in the profitability of mining gold were to vary *exactly* with changes in the value of money, it would be necessary for all prices (including wages and capital costs) to rise or fall in unison. In practice, of course, some prices rise or fall more rapidly than others, so that changes in the profitability of mining gold do not keep pace with changes in the purchasing power of money. Nevertheless, there is not likely to be any marked rise or fall in the value of money without some corresponding, but inverse, change in mining costs. It is therefore correct to say that the amount of gold produced *tends* to vary with changes in the purchasing power of money.

Under conditions of the sort here assumed, a long-term increase in the economic productivity of the country would result in a downward tendency in the price level that would, in turn, tend to stimulate the production of gold. The new gold would, of course, exert a stabilizing influence and would tend to keep the price level from falling as far as would otherwise have been the case. If the productive efficiency of the country is on the increase, however, it is reasonable to assume that more economical methods of producing gold will accompany the increase in efficiency in other lines, in which case enough gold should be produced to prevent any long-continued rise in the purchasing power of money.

The demand for gold again.—There is also another factor that tends to stabilize the value of gold, quite apart from variations in the amount produced. This factor results from the nature of the non-monetary demand for gold. The non-monetary uses of gold are found chiefly in the production of jewelry, watches, ornaments, etc., the demand for which is decidedly elastic. That is, a very small change in the value of these goods results in a large change in the amount demanded. The demand for money, on the other hand, tends toward unity. That is, a change in value tends to result in an exactly proportional change in the demand for money. Accordingly, if the value of money rises somewhat, the demand for money will tend to decrease in proportion, but the non-monetary demand for gold will decrease much

more than in proportion to the change in the value of gold. The marginal significance of gold as money will hence tend to rise above the marginal significance of gold used in the arts, and there will be a tendency for gold to flow from the arts into the monetary stock until the marginal significance in both uses is equalized. In effect, an increase in the supply of money will occur without a corresponding increase in the total stock of gold.

Conclusion.—In a country on a full gold standard with no credit money in use, the quantity of money is limited by the cost of producing gold together with the relative marginal significance of gold used as money and gold used in the arts. When gold is extracted from ore on a cost basis, a fall in the price level tends to bring about an increase in the production of gold that prevents the decline in prices from going as far as it would otherwise have done, and vice versa, while the elasticity of the non-monetary demands for gold leads to an increase in the amount of gold used as money when the price level declines and to a decrease when the price level rises. In these circumstances, the normal value of money tends to be relatively stable, although new gold discoveries, particularly discoveries of placer gold, will introduce an element making for depreciation in the purchasing power of money.

Under modern conditions the quantity of money is not so clearly and definitely limited. Credit money is used much more widely than is gold as a medium of exchange and, by our previous definition of credit money, the proportion of gold needed for a given amount of monetary transactions is thereby sharply decreased. Or, stated differently, with a given amount of gold, the use of credit money permits a large increase in the quantity of exchange media. Our next task, then, is to determine the effect of the use of various kinds of credit money on the value of the money unit.

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CHAPTER 26

BANK CREDIT MONEY AND THE VALUE OF THE STANDARD

Introduction.—As a matter of fact, no such simple monetary system as that assumed near the close of the preceding chapter has ever existed. By the time the single gold standard was generally adopted, banking systems of one sort or another had already evolved and were responsible for the existence in the currency system of bank credit money. At present, as noted in earlier chapters, bank notes and the check currency form the most important elements, from the standpoint of quantity, in the monetary systems of advanced countries. In order to bring the monetary situation in our hypothetical country more into line with reality, therefore, it will be necessary in the present chapter to introduce a banking system and the use of bank credit money in the form of bank notes and checking deposits. We shall first consider the effect of bank note issues on the purchasing power of the money unit.

Elastic bank note issue assumed.—In studying the effect of bank note issues on the value of the standard money, we shall, as before, assume a country without outside connections, and with a standard money of gold coin. In addition, we shall now suppose the existence of a single large bank with branches with the power to issue notes secured by commercial paper up to any amount, provided that a reserve of standard money equal to 25 per cent of the notes in circulation is maintained at all times. Thus we shall have in our assumed monetary system an elastic system of note issue with a possible expansion of four times the amount of standard money available as reserve. Under these postulated conditions, the bank proceeds to issue its notes, which are redeemable in gold at any of its offices.

For a time the bank will receive deposits in gold coin,

but when deposits are withdrawn, assuming that the bank is anxious to build up its gold reserve, payment to the depositor will be made by the bank in bank notes until, finally, practically all of the gold coin of the country except that held against government credit money will be lodged in the vaults of the bank and bank notes will constitute the chief circulating medium of the country. As long as the amount of notes outstanding is no greater than the gold reserve, there will be no economy in the use of gold and the notes will amount to nothing more than gold certificates as a practical matter. This situation, however, will not long continue. Presumably the bank has been building up its gold reserve so that it might expand its note issues and increase its profits by lending out notes to borrowers. The notes resulting from such loans will constitute an increase in the total amount of money, and this increase might conceivably continue until the total of notes allowed by law had been issued, after which the stock of money would be greater by four times than before any notes were issued.

Effect of such note issues on prices.—In spite of the increase in the stock of money, assuming expansion of note issues has occurred as suggested above, there is no likelihood of a corresponding rise in prices if the bank has made its loans for the purpose of assisting in the production or marketing of goods. To illustrate, a manufacturer, let us say, desires additional funds to assist him in the production of goods for the market. He goes to the bank and borrows \$100,000 for this purpose. The bank grants him the loan on the understanding that he will repay it from the funds received when the goods he intends to manufacture are sold. The manufacturer then receives the proceeds of his loan in the form of bank notes. Some of these notes he will use to pay his employees' wages, some to buy material, etc. The notes are thus put into circulation. In the course of a reasonably short time the goods are finished and sold. The manufacturer receives payment for them, pays off his loan at the bank, and an amount of notes corresponding to the amount borrowed is retired from circulation.

The fact that the notes are in use for, say, four to six months, during which time the manufacturing concern is

producing and selling its goods, increases the quantity of money during that period, but does not necessarily lead to any increase in prices. In an established banking system the situation is complex and requires careful analysis. The manufacturer, as noted, uses the borrowed funds in part to pay wages and in part to buy materials for manufacturing his goods. In paying wages he is buying the services of his laborers, who, in turn, spend the funds so obtained in buying the various goods and services that they themselves require. But the dealers from whom the laborers purchase their goods will be using a major part of these funds to repay their own indebtedness, either to the bank or to trade creditors, while the part not so used constitutes their own income—payment for their own services. Thus we find that the notes loaned to the manufacturer are used either to pay for services rendered or to retire previous indebtedness. In neither instance would they exert much tendency to raise prices.

As to the portion of the borrowed notes that the manufacturer pays for materials, it is very likely that the seller of these materials will also have borrowed from the bank and that the notes so received by him will be used in large part to repay his loan. If so, they will not be circulating during the entire period of the manufacturer's loan, but will be returned to the bank after being used in a single payment. The bank may, of course, lend these notes out again at once to another borrower, but the latter would then be in the position of the manufacturer of our illustration, and to trace the course of those notes would be merely to repeat what has already been said.

The bank will, as a matter of fact, attempt to keep its notes loaned out steadily, which results in an increase in the amount of money in the hands of individuals paralleled by an increase in the amount of goods and services coming onto the market. The increased flow of goods and services will counterbalance very largely the increase in the supply of money. If, for any reason, such as an increase in the demand for money to hold (an increase in cash balances), the demand for and the production of goods slow down, borrowers will repay their loans, taking whatever loss is neces-

sary, and will refrain from requesting new ones to the same extent as before the slump in demand. The volume of bank notes in circulation will accordingly decrease correspondingly under these circumstances.

Conditions under which note issues raise prices.—Under certain conditions, however, the issuance of bank notes for lending or investment purposes may have a decided tendency to raise prices. Suppose that the bank, having received some of its notes in repayment of a loan, grants a new loan, not to assist in the production or distribution of goods, but for the purchase of real estate, and that the loan is granted for a period of five years. Clearly, currency is here created in excess of the need for it, as measured by the goods and services produced for the market. The bank notes so issued will tend to remain in circulation for five years.¹ During that period they will constitute an addition to the quantity of money that is not offset by an increased flow of goods to the market.

To take another example, assume the bank to have purchased \$500,000 worth of new bonds for its investment account and to have paid for these bonds by the issuance of its own notes. This would have the effect of increasing the amount of money by \$500,000. This money will be used, we may suppose, by the enterprises issuing the bonds to buy equipment and to build factories for the production of goods, but once this capital equipment has been paid for, the notes, instead of being retired, remain in circulation as long as the bank continues to hold the bonds. Moreover, when the enterprises that have sold the bonds have got under way, loans will be applied for and doubtless obtained to assist in the production and sale of the goods that these enterprises are manufacturing. Although this sort of loan is perfectly legitimate, the total amount of money created in connection with these goods will be equal to the amount of the loans granted plus the \$500,000 invested in the bonds that the bank purchased, the latter \$500,000 remaining in circulation for an indefinite period.

¹ This does not mean that the particular notes will remain in circulation for this length of time, but rather that an amount of notes, equivalent to the amount of the loan and in excess of the notes that would have circulated had the loan not been granted, will remain outstanding for five years.

It seems clear, then, that the creation of bank notes for investment purposes leads to an increase in the quantity of money, which is not fully offset by the increased flow of goods and services to the market, and that, other things being equal, the creation of bank notes for such purposes tends to raise the price level and decrease the purchasing power of the money unit.

Before leaving this question, there is one further point that needs explanation. Suppose various individuals come to the bank and deposit with it on savings account some portion of their incomes. Since we have assumed that practically all of the gold of the country is in the reserve of the bank and that the chief circulating medium is bank notes, it is obvious that the bulk of these savings deposits will be in the form of bank notes. From what has been said in the preceding paragraphs, it might be inferred that the bank should not use these notes for making investment loans or purchasing long-term securities. This, however, is not the case. The deposits in question represent a part of the income of the community that the people have received in exchange for their contribution to the economic product of the community and that they desire to invest (indirectly through the bank) in capital goods. The bank may quite properly invest such notes in bonds or use them in the extension of investment loans without unduly increasing the quantity of money or tending to raise the price level. There is a great difference between issuing new notes for the purpose of making long-term loans or investments and using for such purposes notes that have been received on savings deposit and that represent a part of the income of the depositors.

Note issues and changes in the demand for money to hold.—So far we have assumed that there have been no changes in the demand for money to hold. From the point of view of normal money value theory, this assumption is justified, but there may actually be very considerable changes in this factor from time to time. If individuals generally desire more goods and less money (to hold) under certain conditions, they will offer less goods for money than formerly and prices will rise. If such an attitude is accom-

panied by an increase in the amount of bank notes, the result will be a more pronounced rise in prices than would otherwise have occurred. Suppose that consumers generally are desirous of increasing their purchases of goods relatively to their holdings of money. Their increased demand for goods will start a rise in prices. Merchants and dealers, observing the strength of the consumer demand, will themselves desire to increase their stocks of goods in more than the usual proportion, not only to sell immediately to consumers, but to build up inventories that they hope to sell somewhat later on at higher prices. If they are enabled to borrow at the bank to acquire these goods, the increase in the amount of bank notes will assist in the further rise of prices, since goods are purchased with these notes that are not intended for immediate sale, so that the life of the loan will probably have to be extended by renewing it when it comes due. Also, the notes get into the hands of other dealers, laborers, etc., and, inasmuch as they are spending larger parts of their incomes for goods and holding less as money than before, the rise in prices will be further accentuated.

On the other hand, an increase in the demand for money to hold on the part of consumers will have a reverse effect. They are unwilling to buy goods except at lower prices, and this decrease in consumer demand is transmitted to dealers who then desire to get rid of their surplus stocks in exchange for money, since no higher—and probably lower—prices are in prospect, and their current debts must be paid. If the bank renews the notes of borrowers at such a time, and even grants them added loans if they so desire, the money so obtained is not used to acquire goods, but to pay debts. Some of it doubtless will get into the hands of employees and others not of the businessman class, but even these recipients prefer to hold the money rather than to spend it, and dealers must continue to cut prices in order to dispose of goods and get the money necessary to pay back their debts at the bank. Thus, even though the manufacture of goods is actually decreased somewhat, the increase in the demand for money to hold is sufficient to cause its value to rise, even in spite of a considerable possible increase in the quantity of money.

Inelastic bank note issues.—In the previous discussion, we have considered the effect on the value of money of elastic bank note issues only. As for inelastic note issues, such as national bank notes, their effect on the value of the standard is practically the same as that exerted by government credit money.² When put into circulation, they increase the total quantity of money and, being inelastic, they tend to remain in circulation indefinitely. They thus permanently increase the supply of money and exert a corresponding tendency to raise prices. It must be remembered, of course, that if the gold stock of the country is large, so that the central bank has large surplus reserves, that institution may meet added demands for money by paying out gold, government notes, or other forms of money that are usually considered inelastic. When loans of such money are paid off, the amount in actual circulation is decreased and all forms of money acquire a certain degree of elasticity. In general, however, it may be stated that note issues that do not provide a proper element of elasticity exert a greater tendency toward decreasing the value of money than do issues that are properly elastic.

Similarity between elastic bank note issues and the check currency.—The relation between the check currency and the value of the standard is practically identical in all respects with that of elastic bank note issues of the type that we have been considering, and it will therefore not be necessary to spend a great deal of time on this phase of the subject of credit money. It has been objected, and by an extremely keen student of the subject, that the check currency cannot be said to constitute money, and it will prove advisable to consider this objection before proceeding to take up the influence of the check currency on the value of money. The objection referred to is as follows:³

A still worse error, which has, unfortunately, been countenanced by many high monetary authorities in recent years, is to suppose that the aggregate of deposits is a kind of money (sometimes it is called "bank money") which should be added to the stock of coin and notes existing at any moment. The individual, no doubt, finds "money in the bank"

² To be considered in the next chapter.

³ Cannan, *Money*, p. 81.

much the same as "cash in the house," but the aggregate of all the individuals' balances at their banks is only an amount which bankers are liable to pay, but which they could not possibly pay in cash all at one moment. A liability to pay cash is certainly not cash.

If by cash the standard of value as embodied in the standard coin is meant, Dr. Cannan is quite right in asserting that deposits are not cash. But, in that case, neither are notes, which he includes in the monetary stock. He is also correct in his statement that bankers could not possibly pay all their deposit liabilities at one moment. But, again, neither could most bankers pay *all* of their note liabilities in cash at one moment. The Bank of England, in normal times, could pay a slightly larger proportion of its note liabilities than of its deposits in gold, but the difference is one of degree and not of kind. There can be no quarrel with anyone who wishes to define money as standard full-bodied coin, although the practice of so doing leads to a narrow and somewhat absurd position if carried to its logical conclusion. However, to include notes as money and exclude checks is nothing short of contradictory, as both bank notes and checks are fundamentally the same in nature.

The confusion that has existed in the minds of some with regard to checks and bank notes doubtless arises from two facts. First, bank notes are usually finely engraved and resemble the paper money of the government in general appearance, while checks have no such resemblance to other forms of paper money. Second, checks generally pass from hand to hand but once, or at most a few times, while bank notes may pass from hand to hand many times before being presented for redemption. These differences, however, are merely on the surface. Checks could be as elaborately engraved as bank notes if it were worth while to do so. The other difference is more important, apparently, but not fundamentally. A check will ordinarily be used in but one payment before being deposited by the holder, because (1) it is made out to the order of a definite party and has to be endorsed before it can be used in making another payment, (2) it is usually for an odd amount, having been created to make a special payment, and (3) the bank is liable to pay the check on demand only as long as the drawer has

a sufficient deposit to his credit to cover the amount of the check. The last reason is the most important. Brown is willing to accept Smith's check because he knows Smith and believes him to have sufficient funds on deposit to cover the check. Williams, who knows Brown but not Smith, would accept Brown's check, but would hesitate to take that of Smith, even though it were endorsed by Brown. Further, Smith's check will probably not be for the right amount, and it is just as easy and much more satisfactory all around for Brown to deposit Smith's check, get the amount of it credited to his account, and then draw a new check of his own to pay Williams.

Compare this process with payment by means of bank notes. The bank note evidences a liability of the bank to pay lawful money on demand. If Smith pays Brown with bank notes, the liability of the bank is transferred from the former to the latter. Brown uses the same notes to pay Williams and the liability of the bank is again transferred. The nature of the transaction would not have been essentially different if Brown had taken the notes received from Smith to the bank, had them canceled, and had obtained new notes representing the same liability with which to pay Williams. Yet this latter procedure is precisely what happens in the case of most payments by check. A new paper evidence of the same liability is used for the second payment.

We have dwelt on this at the risk of considerable repetition because of the necessity of a clear understanding of just why checks are to be considered in a similar light to bank notes. Both act primarily in the capacity of media of exchange, and both fulfill the function satisfactorily, which definitely places them both in the category of money in accordance with our definition.

The relation of the check currency to the value of money.—The similarity between a check and a bank note currency having been demonstrated, it follows that their effects on the value of standard money are similar in nature. The wide use of checks as money permits an economy per unit of money in the need for the standard, and the extent of this economy depends upon the proportion of reserves maintained against deposits. Because of the fact that the

check currency is expanded through the lending operations of the banks, as in the case of elastic bank note issues, the effect of an increase in quantity tends to be counterbalanced in part by an increase in goods if the banks follow a sound lending policy, and a decrease in productive activity is normally followed by a repayment of loans and some decrease in the quantity of the check currency outstanding. On the other hand, the creation of such currency to purchase investments or the loan of it for investment purposes will have the result of increasing the quantity of money in the hands of the public without any rapid increase, if any at all, in the supply of goods, and prices will thus tend to rise more rapidly than would have been the case if short time loans only, for the production and marketing of goods, had been made.

It is not necessary to repeat what has been said previously concerning the possible results of changes in the demand for money to hold. The facts there given apply equally well to all kinds of money, whether credit or full-bodied. The demand for money is exerted quite without reference to the kind of money, provided only that it is generally acceptable, and acceptable it must be in order to be devoted to use as money at all. Finally, it should be noted that the same considerations concerning savings deposits and bank note issues apply to the relation between savings deposits and the check currency. Savings deposits are not themselves to be considered as money, since they do not serve as a medium of exchange. They are created by the deposit of money, however, and that money—be it gold coin, bank notes, or check currency—may properly be devoted to investment uses.

Conclusion.—In the present chapter we have shown that the use of bank credit money increases the total quantity of money, but that in a properly conducted banking system the use of this type of money does not tend to raise the price level because the effect of the increase in the quantity of money is offset by a corresponding increase in the flow of goods and services to the market. Clearly, however, the creation of bank credit money does permit a larger volume of trade to be carried on with a given amount of gold. Looked at in this way, the use of bank credit money may be

said to prevent the price level from falling, rather than to raise prices.

In addition to bank credit money, credit money may be issued by the government directly, or the note issues of the central bank may, under certain conditions, be made to serve the ends of the government and so become, for practical purposes, a form of government credit money. Logically, perhaps, the issuance of government credit money should be treated prior to a discussion of bank credit money. Because the issuance of government credit money exerts its most potent influence through the banks, however, it has been deemed advisable to give precedence to the discussion of bank notes and the check currency. Having completed this, we shall turn our attention in the following chapter to the influence of government credit money on the value of the standard.

CHAPTER 27

GOVERNMENT CREDIT MONEY AND THE VALUE OF THE STANDARD

Introduction.—The chief form of government credit money in use in modern gold standard countries is subsidiary and minor coin. The United States, Canada, the Irish Free State, and certain South American countries, aside from minor dependencies, stand practically alone in the use of government credit money of the larger denominations. In many countries, however, central bank notes are given full legal tender powers and bear an important resemblance to government credit money in certain circumstances. It will accordingly be necessary to take account of central bank issues in certain phases of the ensuing discussion. We shall first consider the effect of redeemable government credit money on the value of the standard, after which attention will be turned to the more important problem of inconvertible government money.

Subsidiary money.—The effect of subsidiary money on the value of the money unit is negligible if the system of subsidiary money is soundly operated and managed. Fractional denominations are essential to the conduct of retail trade; even the simple gold standard system postulated in Chapter 25 would require the use of subsidiary and minor coin in order to function effectively. Assuming the fractional coins to be sold by the government for gold, an increase in the quantity of subsidiary money would, at first, be offset by a corresponding decrease in standard gold coin. Since a certain amount of the subsidiary money would always be required, however, a large part of this gold could be paid out again by the government, with the result that the total quantity of money will be increased with no *necessarily* corresponding increase in goods and services. On the other hand, the impediments to trade that the lack of a proper supply

of fractional money imposes are so great that it is more than likely that the introduction of subsidiary money would be fully compensated by an increase in real income.

Once a satisfactory system of subsidiary money is established, changes in the quantity are offset by changes in the amount of standard money, the government selling subsidiary coin for gold and redeeming it, when required, in standard coin from its gold reserve.

Government notes.—When the government issues paper notes that are redeemable in standard coin¹ and maintains a reserve of less than 100 per cent for the redemption of the notes, the quantity of money is increased. The initial effect of the introduction of such notes will tend to be an increase in the price level, as the notes will in all probability be paid out by the government for fiscal rather than for commercial purposes, so that the total stock of money will be increased without a corresponding increase in real income. If the issue is maintained at a fixed sum, as in the case of United States notes, once the effect of the issue has worked itself out on the price system, the notes become a part of the permanent stock of money. Their only effect on the price level then is to keep it from falling as it would tend to do if the issue of paper money were retired.

Our monetary system furnishes another example of government credit money in the form of the silver dollar.² Prior to 1933, the silver dollar was not directly redeemable in gold, but since it was full legal tender, it was accepted by the government in payment of taxes, duties, and other obligations. Inasmuch as the government, in turn, was willing to meet its own obligations in gold, an indirect system of redemption prevailed. The supply of silver dollars was limited to a fixed amount, and the indirect system of redemption was therefore adequate to maintain them at par.

When the quantity of silver dollars was being increased under the acts of 1878 and 1890,³ and again after 1933, the

¹ United States notes in this country and Dominion notes in Canada were examples of this type of paper money.

² The silver five-franc piece occupied a similar position in France prior to World War I.

³ Under the act of 1890 the increase in currency first appeared in the form of Treasury notes of 1890, secured by silver.

supply of money was increased without regard to the requirements of trade and industry, and an upward tendency on prices was exerted.⁴ As long as the supply of silver dollars was maintained at a fixed level, however, silver dollars and certificates, like United States notes, formed part of the permanent stock of money of the country and affected the value of the dollar only by helping to maintain the monetary stock at its existing level.

Central bank notes.—The notes of central banks, although not government credit money in a strict sense, at times partake of the characteristics of the latter type of money. To the extent that central bank notes are put into circulation to meet the demands of commercial borrowers they are similar to the elastic note issues discussed in the preceding chapter and need not concern us further at this point. In some countries, however, a certain proportion of central bank notes, known as the fiduciary issues, is secured by government or other bonds, and represents, theoretically at least, an amount of currency not greater than that needed by the country at all times. This portion of the central bank's notes bears a strong resemblance to the government notes already described and has a similar effect upon the value of the standard. The same may be said of central bank notes issued to the government by way of loan and secured by government obligations. In countries operating on the gold standard under normal conditions, the amount of notes issued as a result of government loans is usually trifling or nonexistent. In times of war or stress, on the other hand, notes of this sort may come to form a dominant element in the currency, especially if gold redemption is suspended. Central bank notes in these circumstances become virtually government credit money and help to bring about a great decrease in the purchasing power of the money unit. Again, in other instances, the government may resort to the issuance of its own notes under stress of war rather than to accomplish its ends through the note issues of the central bank.

Although war conditions are decidedly abnormal, they offer numerous examples of monetary phenomena, an under-

⁴ This was, in fact, offset by other factors, but so far as the silver dollars alone were concerned, the statement is correct.

standing of which will help us to clarify the problem of the value of money. The remainder of the chapter will accordingly be devoted to an analysis of the forces determining the value of money under the stress of war conditions.

IRREDEEMABLE PAPER MONEY

Money in time of war.—As noted in the preceding paragraph, the issuance or creation of unduly large amounts of money by the government, or by the banking system in response to government borrowing, is usually a wartime phenomenon. As such, it must be considered as abnormal. This does not mean, however, that monetary policy and practice in time of war can be passed over as of slight importance. To a world that has experienced two well-nigh all-embracing conflicts in less than half a century, war monetary and fiscal policy and its results have acquired an interest and importance far beyond that attaching to these factors in the relatively peaceful last half of the nineteenth century. It is therefore necessary for us to consider the subject in some detail.

Differing techniques of currency inflation.—In both World Wars I and II, the technique of currency inflation has differed somewhat in different countries. In England and the United States, for example, where the use of the check currency has been widespread, inflation has usually started with an expansion of the check currency. This has been followed by rising prices and the need of the banks for more notes to meet the increased business demands for hand-to-hand money and for more notes and central bank deposits to meet the banks' needs for added reserves. The added demands for hand-to-hand money may be met by the issuance of government treasury notes, as in England in World War I, or by the expansion of central bank note issues, as in the United States in the same war.

In countries where the check system is not highly developed, on the other hand, the expansion has been largely in central bank notes as a result of government borrowing at the central bank to meet a more or less substantial part of its wartime expenditures. The exact way in which the increase in currency comes about, however, is not so important as the fact that there is such an increase. It is the undue in-

crease in the amount of currency, not its form or the precise way in which it comes into being, that is important in bringing about a decrease in the value or purchasing power of the money unit.

Although a discussion of the details of inflation in different countries as a result of World Wars I and II would be interesting, lack of space precludes any such extended consideration of the problem here. Attention will therefore be confined to a brief survey of the experience of the United States in both world wars from a monetary standpoint.

Inflation in the United States—World War I.—The outbreak of World War I occurred in Europe in August of 1914, but the United States did not enter the war until April 1917—almost three years later. However, the effect of the war on American prices was evident before we entered the conflict. After an initial period of uncertainty and confusion, the European demand for American goods brought on a large-scale boom in business and agriculture in the United States. By the time we entered the war in April 1917, the wholesale commodity price index of the B. of L. S. had risen to 173 (1913=100) and the cost of living index had reached 131. Snyder's index of the general price level had advanced to 135 in the month of our entry into the war.

The decline in the purchasing power of the dollar that occurred prior to May 1917 was the result of the intense European demand for our goods, backed up by the necessary monetary purchasing power. In spite of a high degree of production and employment in the United States, goods could not be produced in amounts sufficient to meet the demand except at higher prices. The importation of over \$1,000,000,000 in gold in 1915-1916 furnished a more than sufficient addition to the credit base to permit the expansion of monetary purchasing power necessary to support the higher price level without the slightest threat to the maintenance of the gold standard in this country.

Following the entry of the United States into the war, an embargo was placed on the shipment of gold to foreign countries, thus removing the United States from the gold standard internationally. In addition, by means of legislation and procedures described in earlier chapters, practically

all of the vast monetary gold stock of the country was concentrated in the vaults of the Federal Reserve banks where it could serve most efficiently as a base for the expansion of Federal Reserve notes and the check currency.

The war was financed in part by increased taxes and in part by borrowing. The borrowing was accomplished largely through the sale of Liberty bonds to the public and, since the amount of bonds offered was in excess of the public's available savings, it was necessary for the purchasers in many instances to borrow from the banks on the security of the subscribed bonds in order to obtain the necessary funds to pay for the bonds subscribed to. The subscriber to a \$100 bond, for example, might put up \$20 in cash and borrow \$80 from his bank, putting up the bond as security. The bank would then credit the Treasury with a \$100 deposit and would retain the coupon interest on the bond as its payment for making the loan. In this way, the amount of check currency was increased substantially as the result of bond sales in the various Liberty bond campaigns.

The demand for loans from the banks from purchasers of bonds plus the demand from business enterprises soon would have exhausted the lending capacity of the banks without outside assistance. Such assistance could be obtained from the Federal Reserve banks. By rediscounting customers' paper at the Reserve banks, member banks could replace earning assets with new reserves and could thus continue their lending operations. In like manner, paper could be rediscounted to obtain Federal Reserve notes as the demand of the banks' customers for hand-to-hand money increased. During the period of our participation in the war, bills discounted at the Reserve banks increased by \$1.8 billion, of which \$1.3 billion represented rediscounted war paper (notes and bills secured by government bonds).

Meanwhile, the production of goods did not increase in any marked degree. Snyder's unweighted index of production (87 items) rose only from 124.53 in 1916 to 131.39 in 1917 and declined to 125.49 in 1918. With certain exceptions, prices were left free to seek their natural levels and, since monetary purchasing power was constantly expanding, the rise of the prewar years continued. By November 1918,

the month in which the war ended, the B. of L. S. wholesale price index had risen to 203, while the general price level and the cost-of-living indexes stood at 175 and 180 respectively.

With the close of the war the pressure on prices was intensified. Production fell off in 1919, but the average for 1919-1920 was close to wartime levels. The pressure of demand on prices was, however, intensified. With the completion of the Victory Loan drives in 1919, consumers found themselves in possession of substantial amounts of government bonds that could be sold for cash plus a desire for goods, many of which had been unobtainable during the war period. They accordingly set out on a buying spree that, even though production was well maintained, sent prices to higher and higher levels.

The wholesale price index reached a peak of 247 in May of 1920 while the cost-of-living index, which lags behind wholesale prices, attained its high point of 224 in July. Prices thereafter declined rapidly in a severe recession of world scope.

Inflation in the United States—World War II.—The course of prices in the United States during and following World War II was different in a number of respects from that just described for World War I. When World War II broke out in Europe in 1939, the United States was recovering from a sharp depression. Wholesale prices (B. of L. S. index—1926=100) were somewhat below the level of 1937 and substantially lower than in the base year of 1926. Industrial production, while it had recovered substantially from the 1938 trough, was still below the level of 1937. Unemployment, which had been high all through the thirties, was still widespread, the estimated number of unemployed being in the neighborhood of 8,000,000. Considerable unutilized productive equipment was available.

Although the United States did not officially enter the war until the end of 1941, a defense program was inaugurated after the outbreak of war in Europe that exerted pressures on the economy similar to, although less severe than, those of actual participation. It will be seen from the discussion in the preceding paragraph that the economy of the

United States was in a favorable position to meet the demands upon it without undue pressure on prices. Actually, the physical volume of industrial production rose more than 50 per cent during 1940-1941, while the wholesale price level advanced by slightly more than 10 per cent and the cost of living by about 6 per cent.

With our entry into the war, it was obvious that the pressure on prices would be increased and it was decided to introduce a system of controls in order to avert, so far as feasible, the evils of wartime inflation. The problem of price control is not accomplished easily. It is not merely a matter of fixing ceiling prices on commodities. Costs, including the highly important cost—wages—must be fixed as well. Moreover, production must be directed, so far as necessary, into lines that will make for the successful prosecution of the war, and remaining goods must be rationed fairly among the consuming public.

It should be clear that, if labor and material costs are stabilized, and no restrictions are placed on who shall use labor and materials for the production of goods, there would be no assurance that production would be properly directed. It is impossible to suspend the regulative function of free market prices without also setting up controls over the amounts and types of goods to be produced.

In attempting to solve this problem, the government agencies not only fixed ceiling prices on the majority of goods, but also prohibited entirely the production of some civilian goods—automobiles, radios, washing machines, electric refrigerators, etc.—and issued priorities on deliveries of various materials based on their relative importance for war or civilian needs, as well as granting subsidies where necessary to assure production and keep prices down. Thus civilians were deprived of many peacetime goods, of some because they were not produced at all, and of others because their quantities were extremely limited.

Critique of U. S. price control.—In appraising wartime control of prices in the United States during World War II, it would be possible to find many minor points that deserve criticism. This would doubtless be true in any country attempting a difficult task of this magnitude. For example,

control was scattered among several agencies⁵ instead of being centralized under one responsible head. Annoying duplication of reports also caused objections. Unduly complicated procedures might also be mentioned.

From the point of view of preventing inflation, however, with which we are here concerned, the agencies did a better job than might have been anticipated. The B. of L.S. wholesale price index stood at 93.6 (1926 = 100) in December 1941 and at 104.1 in July 1944, while the cost-of-living index moved from 110.5 (1935-1939 = 100) to 126.1 in the same period. After the beginning of 1943, the movement of both of these indexes was comparatively slight.

It must be remembered, of course, that these were official indexes and were not quite as accurate as in ordinary peace times due to the existence of rather widespread black markets in which prices were far above authorized ceilings, but which, being illicit, were naturally impossible of inclusion in the price indexes compiled by the Bureau of Labor Statistics. It has been estimated that the American public spent as much as two billion dollars a year in paying black market premiums, but how many points this would have raised the cost-of-living index it is impossible to say.

In spite of black market activities, which were practically impossible of complete eradication, the record of American price control during World War II, judged from over-all results, was quite successful. It was annoying to many, but the bulk of the public cooperated sufficiently to make the program work. In this connection, however, it should be pointed out that one major reason for such widespread public cooperation was the maintenance of civilian production at comparatively high levels. Except for durable consumer's goods, which were not produced at all, civilian needs were well met in most lines. Had scarcities, such as those in gasoline and nylons, developed in many lines, black markets would have been more widespread and over-all control of prices would probably have been considerably less successful than they were.

⁵ The Office of Price Administration (O.P.A.), the War Labor Board (W.L.B.), the War Production Board (W.P.B.) and the War Food Administration (W.F.A.) were the chief agencies.

CHART II
CONSUMERS' PRICES
 BUREAU OF LABOR STATISTICS INDEXES, 1935 = 100

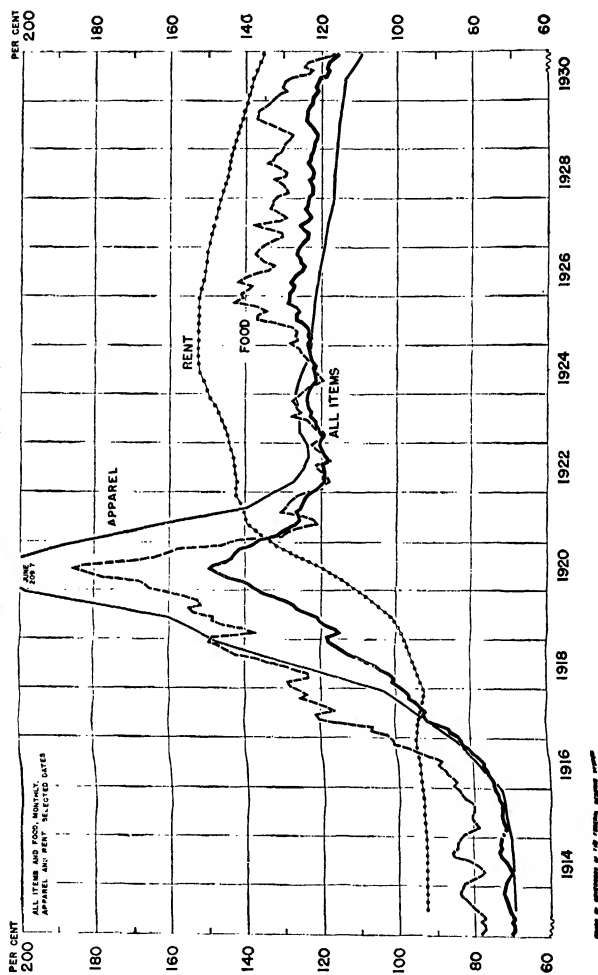
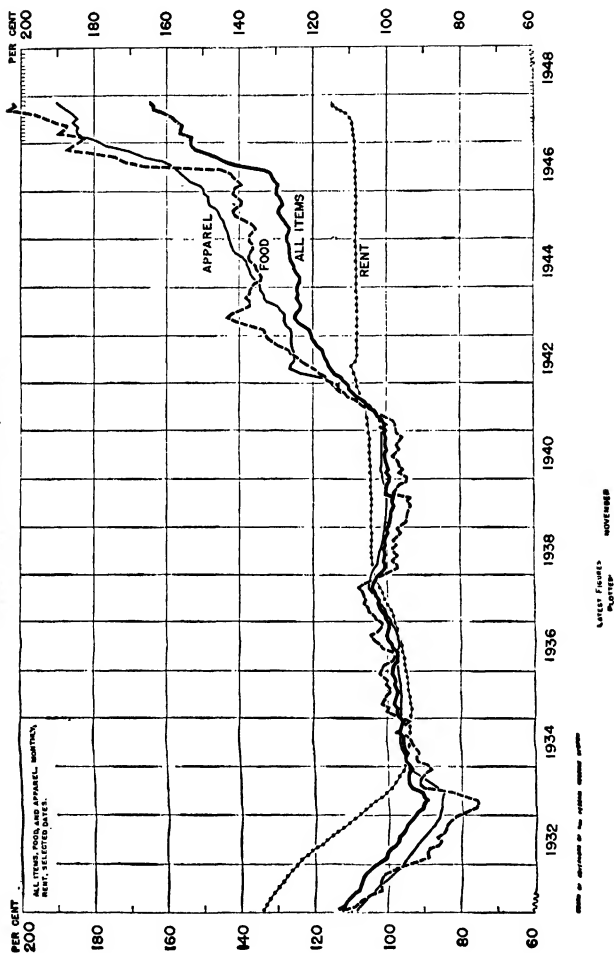


CHART 11 (cont'd)
CONSUMERS' PRICES
 BUREAU OF LABOR STATISTICS INDEXES, 1933=100



The removal of price controls.—Following the end of the war with the surrender of Japan in August 1945, prices rose considerably. Although the O.P.A. continued to function, some ceilings were removed and others raised and the price level rose accordingly. Between September 1945 and June 1946, when the price control law expired, the B. of L. S. wholesale price index rose from 105.2 to 112.9.

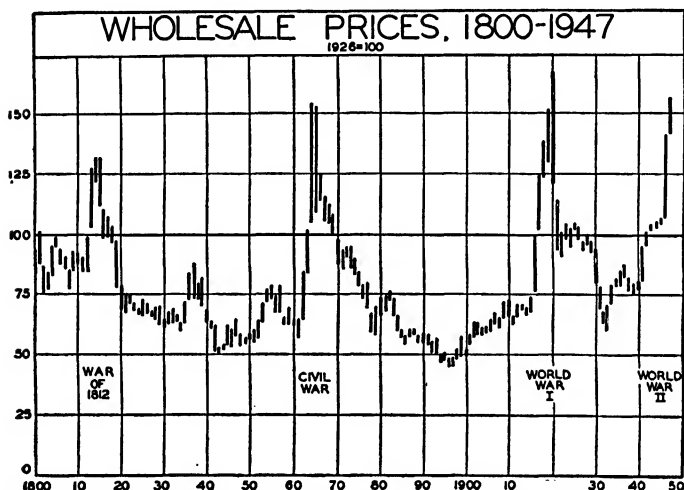
A new price control bill of a relatively mild nature was unacceptable to President Truman and was vetoed by him. Consequently, all controls ceased to exist as of the end of June and the wholesale price index advanced to 124.7 in July. Another bill, permitting certain prices to be controlled, was approved by the President. However, this had little effect on the price index as President Truman, on November 9th, freed from controls practically all items—including wages—except sugar, rice, residential building, and the ceiling on rents. The price index rose to 140.9 in December of 1946.

The year 1947 was practically free from price control except for the continuation of the ceiling on rents. The rise in prices that had begun with the termination of the war continued throughout the year, the wholesale price index rising to 161 in December, just shy of the peak reached by the same index in 1920. Meanwhile, the B. of L. S. index of consumers' prices (1935-1939 = 100) had reached a point considerably above the peak of 1920, although the percentage rise from the end of the war was approximately the same following World War I as that following World War II (to the end of 1947), as can be seen from Chart 11.

Price controls and inflation.—The conclusion to be drawn from the foregoing comparison of the experience of the United States during and following World Wars I and II is that temporary price control during the war period is not a preventive of inflation. Chart 12, which shows the course of wholesale prices in this country since 1800, indicates that the country has suffered from inflation as a result of the War of 1812, the Civil War, World War I, and World War II. In the last-named war, the United States pursued a policy of extensive price control, in the others she did not. The result, as indicated on the chart, is that prices rose during the three

previous wars while they were held relatively stable during World War II, the rise coming after the war was over and the controls had been removed.

CHART 12



Reproduced by permission of The Cleveland Trust Company from that bank's *Business Bulletin*, December 15, 1947

This being the case, it may be asked with some show of reason, why remove the controls? The answer is that in a free economy the successful peacetime control of prices cannot be made to work satisfactorily. Moreover, such control is not desirable, even if it could be made to work, if the price system is properly to perform its function of directing production and consumption into proper channels. Theoretically, it might appear desirable to maintain controls of various commodities until supply—at controlled prices—had caught up with the demand. Partial control of this sort, however, is almost impossible of effective administration and, moreover, involves a considerable risk of pressures being exerted to continue the controls well beyond their possible usefulness.

Since price control may hence be considered a wartime palliative rather than a preventive of inflation, it is pertinent to inquire why wars are almost inevitably accompanied by

inflation and whether it would not be possible to take steps to avoid this evil result of an extended war. We shall next direct our attention to these questions.

Why wars breed inflation.—When a country enters into war, the government comes into the market as a large purchaser of goods and services. Since the government is not, generally speaking, a producer of goods, it must buy what it needs with money. This money may be obtained in one of three ways. First, the government may create the money either by resorting to the printing press or by borrowing from the central or commercial banks and taking the proceeds of these loans in bank notes or checking deposits. This results in an increase in the amount of money in the hands of the government with no diminution of the amount of money in the possession of the public.

A second method by which the government may obtain the money it needs is to borrow, not from the central or commercial banks, but from the public. In this case private investors (individuals, savings banks, insurance companies, etc.) buy the obligations of the government. The amount of money in the hands of the government is increased, but the amount in the possession of the public is decreased by the same amount.

A third way is by public taxation. Here, as in the second case, the money is merely transferred to the government from the public, no increase in the total amount of money taking place.

Considering now the effects of the three methods on the value of money, it may be stated in a broad way that the first is inflationary while the second and third are not. In the first instance, the government comes into the market with the newly created money to compete with the public (whose money supply is not reduced) for the goods that it wants. Naturally, the government, having the ability to obtain as much money as necessary for its purposes, will win out, but will do so at the expense of the public by driving up prices. Not only are civilians not deprived of any of the money that they originally held, but, as the government pays out its new money for war materials, the money incomes of individuals are increased. Individuals, bidding for the limited supply of

civilian goods, drive their prices up to higher and higher levels.

When, on the other hand, the government obtains its money by taking it away from the public, as under the second and third methods referred to above, the money in the hands of the public is reduced in proportion to the reduction in the supplies of civilian goods and the pressure on prices is held in check.

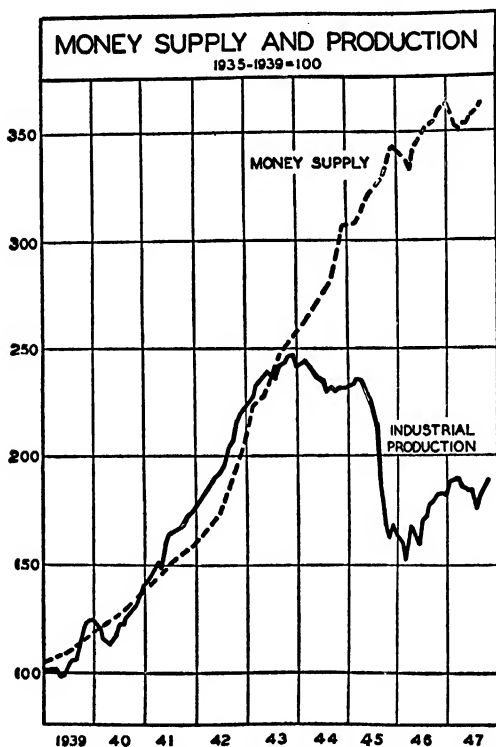
The foregoing analysis should be qualified in certain respects. If, when the country enters a war, the factors of production are not fully utilized, the creation of a certain amount of additional money for expenditure by the government will result in an increase in the total production of goods that will offset to some extent the effect on prices of the increased quantity of money. This was the situation in the United States at the start of the defense program. As will be seen from Chart 13, the increase in the money supply was paralleled by an increase in production up to the middle of 1943, so that the pressure of the money supply on prices did not become excessive until the later years of the war. This pressure undoubtedly made price control more difficult in the latter years of the war and, of course, began to exert a direct effect on prices in the postwar years, especially since production declined sharply while the money supply continued to increase in irregular fashion.

The inference from the preceding paragraph is that, in the absence of price control, once the productive system of the country is going full blast, increases in the quantity of money would simply increase money incomes without further stimulation of production, and, the entire increase in purchasing power being offered against the practically fixed output of goods, the price level would rise in proportion to the increase in the quantity of money.

The preceding inference holds good under the assumptions that the public has confidence in the government, being hence quite content to accept the money issued, and that the public continues to hold the same proportion of its real income in the form of money as had formerly been the case. Actually, these assumptions are not justified under conditions of the type here under discussion. Even before the inflation has

proceeded to any great lengths, before there is any real loss of confidence in the government, it is quite likely that individuals will decrease their cash balances in relation to their real income. In a period of great industrial activity, with full

CHART 13



Reproduced by permission of The Cleveland Trust Company. *Business Bulletin*, December 15, 1947.

employment of labor, people tend to prefer goods to cash, even going into debt to obtain them before the income to pay for them is at hand. Or if, in time of war, they reduce their consumption for patriotic reasons, they are still likely to hold less cash than usual, being spurred on to purchase government bonds to assist the prosecution of the war. If some of the money that has formerly been held as cash

balances is invested in government bonds, it is, of course, immediately expended by the government in the purchase of war materials and so has the same effect on prices as though expended by the public directly. We may be quite certain, then, that there will be a decrease in the demand for money to hold that will exert an upward influence on prices in addition to that resulting from the increase in the quantity of money.

If the inflation becomes extreme, the demand for money to hold will doubtless decrease even further. True, since the irredeemable paper money is legal tender, the public is practically forced to accept it, but the people will get rid of the notes at the earliest possible opportunity in exchange for goods since the notes will be expected to depreciate in value if held only for a few days. Moreover, as Mr. Robertson has pointed out, the transaction price level will tend to rise even more rapidly than the income price level since manufacturers and traders, looking forward to a continued increase in paper money, will fix their prices on the basis of the amount of money that is expected to be issued as well as on the amount already in existence.⁶

In circumstances of this sort, the rise in prices is more than in proportion to the increase in the quantity of money and itself makes necessary the issuance of additional notes, for the rapid rise in prices means that taxes and receipts from bond issues fail to cover the necessary expenditures so that more money must be printed to meet the requirements of the Treasury. The further increase in the quantity of money in turn diminishes the demand once more, and the cycle is repeated until the whole system collapses.

It is also thought at times that the value of a given country's currency, under a régime of inconvertible paper money, is determined entirely independently of the value of gold. This, however, is not usually the case. Dr. W. C. Mitchell, in an illuminating study of the Civil War period in the United States, having charted the movements of commodity prices and the premium on gold,⁷ concludes his discussion

⁶ D. H. Robertson, *Money*, revised edition, 1929, pp. 128-29. Mr. Robertson has evolved an ingenious equation to represent this state of affairs, namely, $P = (M + M') V/T$, where M' is considered as "latent money not yet created."

⁷ Which was dealt in on the market during this period.

of their relationship as follows:⁸ "In all these movements from 1862 to 1865 the lines representing the premium and the median of relative prices correspond so well that one cannot resist the conclusion that these changes are mainly due to a common cause, which can hardly be other than the varying esteem in which the notes of the government that constituted the standard money were held." That confidence or esteem was an important factor in determining the price level is definitely proved by the fact that "in the six months following the passage of the third legal tender act [of the Civil War], when notes were being issued in accordance with its provisions, the value of the currency appreciated in a marked degree."⁹ Such movements of the price level, in the face of inverse changes in the quantity of money, are to be explained by increased confidence in future gold redemption by the government. They may also be explained in terms of an increase in cash balances that are held either by speculators, who hope for an increase in value, or by the public generally as a result of increased confidence. The fact that prices in greenbacks were fixed during the Civil War in reference to the gold premium, however, indicates that the value of gold still played a part in determining the value of the irredeemable currency.

We shall have to conclude that the demand for money plays an important part in determining its value under war conditions, especially when the inflation is extreme. The quantity theory is a theory of the normal value of money, however, and we should scarcely expect it to be entirely valid under the abnormal conditions that occur during and after a great war.

If price control is in force during a war, the forces of demand referred to in the preceding paragraphs will not become evident until the postwar period when the control is removed. In fact, if price control is successful, the demand for money to hold is necessarily increased during the control period. Money incomes are increased, but, since goods are rationed and their prices are fixed, the increased money (if not transferred to the government through taxation or bond

⁸ *A History of the Greenbacks*, p. 279.

⁹ *Ibid.*, p. 208.

sales to investors) cannot be used and is held pending the removal of controls following the war. With the removal of controls, there will occur a sharp decrease in the demand for money to hold and prices will tend to rise, even without the creation of any more money.

Varying degrees of inflation.—It has been observed that inflation practically always occurs during or (with price control in the war period) following a war, and the reasons for it have been considered. It should be noted, however, in this connection, that the degree of inflation varies from war to war and from country to country. In World War I, for example, the wholesale price level, on a 1913 base, rose to a peak of 313 in England (in April 1920), to 588 in France in the same month and to 1440 in Germany in December of 1920. The chief reason for the fact that inflation proceeded to greater heights in France and Germany than in Great Britain is to be found in the failure of the former countries to introduce comprehensive tax programs, while England taxed her subjects heavily. If the entire cost of a war could be met through taxation, there would be no reason for any permanent depreciation in the value of money, since the money obtained by the government would be taken from the public, the total purchasing power in terms of money remaining unchanged. Aside from the possible decreases in cash balances, there would be no force exerting an upward pressure on the general level of prices. The same would be true if the money used by the government were obtained from the sale of bonds in the market in competition with corporate issues, provided that the bonds were purchased from real savings. When bonds are issued in excess of savings, however, and are purchased by means of bank borrowing, additional monetary purchasing power is created and inflation tends to ensue. When the government borrows directly at the central bank and sells large issues of bonds as well, the creation of credit money tends to be still greater and the inflation more severe.

Since inflation follows from the method of Treasury financing that results in the creation of large quantities of monetary purchasing power without a corresponding increase in the amount of goods coming on the market, it is pertinent

to inquire why governments do not finance wars through taxation and the sale of bonds to investors, thus avoiding the evils of a severe inflation of prices.

To finance an expensive war entirely by taxation is politically impracticable in a democratic state. Tax rates would have to be raised to such heights as to discourage the interest of the people in winning the war. True, the actual burden is no greater than that incurred under inflation and would probably be much more fairly distributed, but the public is usually more annoyed by higher taxes than by higher prices. The method of borrowing from individuals (or institutional investors) offers an inducement over high taxes in the form of interest payments and the eventual repayment of principal. Unless such a method of financing is made compulsory, however, as are taxes, it is doubtful if the entire cost of a war could be financed in this way.

Actually, a combination of all three methods is generally resorted to. This was the case in the United States in World War II. Taking the defense program and our participation in the war as a unit, something over 70 per cent of revenues came from taxes and bond sales to investors, the remainder from the Federal Reserve and commercial banks. This appeared to be a fairly good showing. Nevertheless, the cost of the war was so great that the financing of even less than 30 per cent of it through the creation of new monetary purchasing power left a large inflationary gap at the close of the war, as already indicated in Chart 13 above.

Inflation under the gold standard.—While it is usual for a country engaging in an extensive war to depart from the gold standard, if such a standard was maintained by it before the war, it is still possible to have an acute inflation under certain circumstances while maintaining the gold standard. The United States, on her entry into World War II, maintained what we have previously termed a provisional gold bullion standard, and this standard was retained during the war period. Actually, a full gold standard probably could have been retained had it been in existence. The point is that the gold stock of the country was so large in 1940 that it was possible to expand note issues and the check currency by

an enormous amount and still remain within the legal reserve requirements of the Federal Reserve and commercial banks. Where a country has an unduly large amount of gold and an elastic credit system, maintenance of the gold standard is no sure preventive of inflation, although its maintenance would, of course, prevent the inflation from developing to the point of currency collapse.

The evils of inflation.—Having now discussed the reasons for inflation during and after wars, it will be well to consider why inflation of prices, at least when at all substantial, is looked upon as an evil. We have seen that the expense burden of a war must be met by the public, so the question naturally arises, Why isn't inflation as good a way of distributing the burden as any of the alternatives mentioned?

If, when the price level rose in a period of inflation, the prices of all commodities and the price of services (wages and salaries, interest, rent, and profits) all rose together in the same proportion, the inflationary method might be defended with some show of reason. Actually, such is not the case. Prices of commodities rise in varying proportions and so do prices of services. It is the disparity in the changes in the latter group of prices that is most objectionable. Wages tend to lag behind the prices of commodities on the upswing while salaries lag far behind wages. The individual who depends for his income on bond interest or annuities receives no increase in money income while he has constantly to pay increasing prices for the things he buys. Business concerns, on the other hand, will—for a time at least—show increased profits as the prices of their products rise faster than costs, and certain speculators may profit. Profits of public utilities and railroads, whose rates are fixed by commissions, may, however, show smaller profits, as commissions are usually slow to permit upward rate revisions even though costs are increasing. So the burden of inflation is inequitably distributed, hitting labor and fixed-income recipients hardest.

Inflation is also detrimental to thrift. The incentive to save is obviously lacking when a given amount of money savings can be expected to purchase much less in the future than the same amount would at present. The person who has gone

heavily in debt is benefited at the expense of his creditors. Under the circumstances, becoming a creditor offers little appeal.

The profit that many businesses show in periods of rising prices is largely illusory. Much of it is reinvested in plant or inventory at higher prices. But, as the incomes of large groups are not increasing or are increasing less rapidly than commodity prices, the demand for the highly priced goods will not be maintained and they will eventually have to be liquidated at a loss. When the inflation becomes extreme, many retailers may be forced to close up their shops because, by the time they reorder, wholesale prices have risen to a point that will not permit them to restock their inventories.

In the end, practically no one profits from inflation and many suffer. Price relationships are distorted and numerous maladjustments appear in the economic system. If the increase in money is checked, so that a complete currency collapse is averted, a painful period of readjustment is practically inevitable. If the increase in money continues to the point of eventual collapse, the evils are even greater. Savings are completely wiped out, insurance policies become worthless, and the morale of the people receives a shock from which it is slow to recover.

An example of disastrous inflation.—As an illustration of a disastrous inflation, let us consider the case of Germany during and after World War I. This case is used as an example in preference to some of the extreme inflations following World War II, since more satisfactory data are available. It is also of particular interest, since Germany resorted to price controls to a considerable extent during the war period, the extreme inflation occurring after the war as indicated below.

In Germany, as in most continental countries, the check currency was little used and Reichsbank notes became the chief instrument of inflation. It had been the plan of the government to finance the war chiefly by means of credit and this course was pursued as long as possible. Gold redemption was suspended by the Reichsbank and, since notes got into circulation largely through the discounting of bills for the Treasury by the Reichsbank, the latter's notes were virtually

inconvertible government issues, although technically they remained bank notes.

In financing the war, the Treasury floated long-term bond issues at intervals and, to meet immediate needs, discounted Treasury bills with the Reichsbank in anticipation of receipts from the sale of bonds. After each bond flotation the government would sharply reduce its indebtedness at the Reichsbank, but not to the previous low level. Consequently, the figure for discounted Treasury obligations rose intermittently to a very large amount.

In addition to Reichsbank notes, the currency was augmented by issues of "Reichskassenscheine" or Treasury notes, and "Darlehnskassenscheine" or loan-bureau notes. The latter were issued by the loan bureaus, on the security of pledged commodities, to small financial institutions and individuals.

Although the inflation of the currency in Germany eventually terminated in a complete collapse, it was kept pretty well in hand during the actual period of the war. By the end of 1920, however, although the worst was yet to come, the inflation had proceeded farther than in either France or England. The wholesale price level (1913 = 100) advanced from 125 in December 1914 to 234 in November 1918, the month in which the armistice was signed. From that height it mounted steadily to 1440 in December 1920. Reichsbank notes in circulation rose from 2,909,422,000 marks in July 1914 to 18,609,873,000 marks in November 1918, and to 68,805,008,000 marks in December 1920. Meanwhile, total discounted bills of the Reichsbank (mostly commercial bills prior to the outbreak of the war, largely Treasury bills thereafter) increased from 2,081,075,000 marks to 22,133,458,000 marks and to 60,634,023,000 marks, respectively, on the same three dates. Treasury and loan-bureau notes combined increased from 180,000,000 marks in June 1914 to 10,465,600,000 marks at the end of 1918.

With the abandonment of price restrictions following the armistice prices began to rise rapidly and, in the years following 1920, the inflation became increasingly violent. The evil effects of the inflation on the wage and salary earners

of the country is shown in the accompanying table. The cost of living reached fabulous heights and, although wages and salaries increased, they did not keep pace with the ever-increasing living costs. Businessmen also suffered in the later stages of the inflation, as they found that they could not restock their inventories since prices had risen so rapidly.

TABLE 48
INDEXES OF WAGES, SALARIES, AND
COST OF LIVING IN GERMANY (1914-1923)
(1913 = 100)

<i>Year and Month</i>	<i>Unskilled Labor</i>	<i>Skilled Labor</i>	<i>High Government, Railway, and University Officials</i>	<i>Cost of Living</i>
1914.....	100	100	100	250
1915.....	110	100	100	350
1916.....	130	120	110	450
1917.....	190	160	110	550
1918.....	310	260	150	550
1919.....	530	400	170	650
1920—March	670	500	200	956
June..	1,010	760	370	1,083
Sept..	1,010	760	370	1,015
Dec..	1,010	760	380	1,158
1921 March	1,140	850	430	1,138
June..	1,140	850	430	1,167
Sept..	1,310	990	490	1,374
Dec..	1,880	1,400	810	1,028
1922— March	2,030	1,510	830	2,897
June..	4,620	3,390	1,600	4,147
Sept..	16,140	11,770	5,810	13,319
Dec..	55,390	40,000	22,780	68,506
1923— March	232,150	167,880	97,010	285,400
June..	829,320	600,240	342,110	765,000
Sept..	1,660,000,000	1,200,000,000	690,000,000	1,500,000,000
Dec..	78,990,000,000	69,440,000,000	50,900,000,000	124,700,000,000

Source: Zahlen zur Geldenswertung in Deutschland, 1914-1923. Bearbeitet im Statistischen Reichsamt 1925.

The wholesale price level rose even more rapidly than the cost of living, reaching 126,160,000,000,000 in December 1923, while note issues of the Reichsbank amounted to 496,507,424,772,000,000,000 marks in the same month. This marked the collapse of the currency. A new temporary unit, known as the Rentenmark and secured by real property, was first introduced, to be succeeded shortly by the Reichsmark, redeemable in gold at the old value (23.82 cents). Paper marks of the inflation period were redeemable in the new units at the rate of 1,000,000,000,000 paper marks to 1 gold mark.

A major reason for the continued increase in currency in Germany following World War I was the inability of the

government to balance the budget. The tax program did not yield sufficient revenues to cover government expenditures and the deficit was covered by borrowing at the Reichsbank. As the inflation proceeded, the difficulty of balancing the budget was accentuated. Even though taxes were raised, by the time they were collected costs and prices had risen to a point where the taxes were still insufficient to meet expenditures and further borrowing was resorted to.

The control of inflation.—The foregoing discussion should make it clear that, when inflation appears in an economy, every effort should be made to hold it in check. It must be remembered that, the greater the inflation, the more severe is the readjustment that must follow. The problem of controlling the postwar inflation in the United States received much attention in this country in the closing months of 1947. Some attention to the various suggestions that were brought out in this connection will be given later in Chapter 33.

Conclusion.—We have now discussed the principles determining the values of money in a particular country. It is clear, however, that before we can arrive at a full understanding of these principles, it will be necessary to take into account monetary relationships that exist among different nations. In the chapters that follow, attention will accordingly be turned to a consideration of international monetary relations.

PART VI
INTERNATIONAL EXCHANGE AND THE
VALUE OF MONEY

CHAPTER 28

RATES OF EXCHANGE UNDER THE GOLD STANDARD

Introductory note.—The general methods of using bankers' acceptances in the financing of foreign trade, as described in Chapter 18, has not altered sufficiently since gold standard days to require any special qualifications. However, such is not the case with the present chapter, dealing with rates of exchange. Since 1933, practically all of the world's leading countries have been off the gold standard. Expedients, such as stabilization funds and rate stabilizing agreements, have been adopted, with varying degrees of success, to try to maintain a fair degree of stability in exchange rates. Any opportunity for development and refinement of these expedients was cut off by the advent of World War II with its universal resort to foreign exchange controls. Following the war, the International Monetary Fund was established, but to date (1947) the chaotic conditions prevailing in the economies of many leading countries has prevented the accomplishment of much in developing free and relatively stable international exchanges.

Just what the future course of events will be cannot be forecast with accuracy. Present indications are that a return to the international gold standard as previously understood is quite unlikely. In spite of this fact, an analysis of exchange rate determination under the gold standard, as well as its general mode of operation, seems desirable. It is impossible to judge the merits of any arrangements that may be worked out in the international monetary field without a knowledge of the way the international gold standard operated. Consequently, the present chapter and the one that follows will be concerned with gold standard conditions. It should be remembered, therefore, that these chapters are concerned with exchange rate determination, gold movements, international

monetary equilibrium, etc., when the international gold standard was in operation.

Payments in foreign trade.—One of the complicating factors in foreign trade is that payments must often be effected in the money of some foreign country that has a different monetary unit from that employed in domestic transactions. In some instances, of course, two countries will have the same unit, as the United States and Canada, both of which have the dollar as a standard. Business and financial transactions between two such countries are accordingly simplified. In the majority of cases, however, different money units are used, and it is hence necessary to translate the prices of goods in one country into the prices in another money unit before exchanges can be effected. This is accomplished in practice by reference to the existing rates of exchange on various foreign countries.

The rate of exchange on a foreign country is merely the price of the right to claim a unit of the foreign country's money in that country. More specifically, the rate of exchange in New York on London is the price in dollars and cents of the right to claim a pound sterling in London.

The market for foreign exchange.—Obviously, if people are to be able to buy foreign exchange in New York, dealers must exist there who have funds in foreign countries that they are ready to sell for dollars and cents. These dealers, as indicated in Chapter 18, are the foreign exchange bankers or the foreign departments of the large New York banks and banking houses.

The market for foreign exchange is, then, similar to any competitive market. It consists of a group of competing buyers—those having payments to make in foreign countries—and another group of competing sellers—those having possession of funds in foreign countries with which the payments in question may be made. Competition among the buyers, on the one hand, and among the sellers, on the other, fixes the prices that will have to be paid for claims to various foreign moneys. Since the price of such claims constitutes the rate of exchange on the foreign country in question, it is necessary to examine carefully the forces that

determine both the demand for and the supply of foreign exchange.

The supply of exchange.—In order to avoid as many complications as possible, we shall confine our attention to the rate of exchange on some particular country, and the rate on England—the price in New York of claims to pounds sterling in London—will be used for this purpose.

In addition, also for the sake of simplicity, we shall assume both England and the United States to be on the gold standard. The supply of English exchange at any time consists of the total of deposits that American foreign exchange bankers have to their credit in English banks. This supply is decreased every time a foreign exchange banker sells a check against his English account, so that it is necessary for him to replenish this account regularly if he is to continue doing business.

There are a number of ways in which the foreign exchange banker may build up his account in England. First, he may ship gold to the English banker who will accept it by weight and credit his account with the appropriate number of pounds. Second, he may transfer funds from an account in another center, such as Paris, to his English banker at the current rate of exchange in Paris on London. Third, he may buy drafts or checks drawn on English banks that have been sent to American exporters by other than English importers who have arranged to pay their debts in London exchange. Finally, he may buy claims to payment in pounds from American exporters to England, send these over for collection, and have the proceeds credited to his English account.

The first two methods are used only upon occasion when rates of exchange are such as to make them profitable and will receive attention at a later point. With the development of New York as an important international financial center, the third method of obtaining English funds is less common than formerly. It is, accordingly, the fourth method that is most widely used by the foreign exchange banker in building up his English deposit.

Different rates of exchange on London.—Although mention has been made of "*the* rate of exchange" on London or

England, there are, in fact, a number of rates. These are shown for September 30, 1929, in the following table:¹

Bankers' Bills

Sight	4.84875 @	4.85500
Cable transfers	4.85500 @	4.86063

Commercial Bills

Sight	4.84688 @	4.85250
Sixty-day	4.79500	
Ninety-day	4.77000 @	4.77250
D/P-sixty days	4.79000 @	4.79500
Seven-day grain	4.84063	

It will be observed that the various rates quoted are divided into two groups: rates on bankers' bills and rates on commercial bills. The former are selling prices at which the foreign exchange banker disposes of his English funds, while the latter are buying prices at which he obtains a new supply of funds in England.

The spread between rates.—There are thus two selling prices and five buying prices here listed for exchange on London, and we must explain the spread that prevails between these different rates. This may best be done by reference, first, to the bankers' sight and the commercial sight rates.

The bankers' sight rate is the price per pound of checks on the banker's London account. Brown, let us say, has a debt of £5000 to meet in England in two weeks, Anderson & Son being the English creditor. Brown goes to his bank in New York and buys a check for £5000 drawn by the bank on its London account and made payable to the order of Anderson & Son. For this he will have to pay the bankers' sight rate.² Having obtained the check, Brown will mail it to Anderson & Son, and in the course of some ten days it will be received by the latter and presented at the bank for deposit or payment.

Suppose, however, that Brown is not in a position to pay his debt until the day before it comes due, and must hence

¹ From the *Bank and Quotation Record* (W. B. Dana Company, New York), Oct. 11, 1929.

² The table gives \$4.84875 @ \$4.85500 for this rate. This represents the range between the high and low rates for the day, and what Brown will have to pay depends upon the rate quoted at the time he makes his purchase.

arrange to have £5000 paid to Anderson & Son at once. In this eventuality, he will be forced to buy a cable transfer from his bank. That is, the bank will be instructed by Brown to send a cable to its London correspondent directing the latter to pay to Anderson & Son on order the sum of £5000. The whole transaction in this case will be consummated immediately.

The spread between cables and bankers' sight bills.—Clearly, there is a considerable difference in the two types of transaction just described. If Brown buys a bankers' sight bill or check, it has to be sent to Anderson & Son by mail, and it will necessarily be ten days or so before the draft is presented for payment and the London account of Brown's bank debited. When a cable transfer is used, on the other hand, the New York bank's London account is debited the same day, so that approximately ten days' interest is lost. The foreign exchange banker accordingly charges a rate for cable transfers that is enough higher than the sight rate to cover the loss of interest involved.

Bankers' sight and commercial sight rates.—The commercial sight rate is the rate paid by the foreign exchange banker for commercial drafts that are drawn by Americans upon English debtors and that are payable by these debtors upon presentation in England. When an American banker buys such a draft, he immediately sends it to his English correspondent who presents it for payment and credits the proceeds to the American banker's account. The process of mailing such a draft to England and having it collected requires about ten days' time. When an American debtor buys a bankers' sight draft and sends it over to an English creditor, the time involved before the draft is presented to the English bank for payment is likewise about ten days. Consequently, the American banker who purchases commercial sight drafts drawn upon English debtors may, *at the same time*, sell his own drafts in like amount to Americans having payments to make in England. The two sets of drafts will arrive in England at the same time and the funds obtained from the collection of the commercial drafts will furnish cover for the American banker's own sight drafts that he has sold to American debtors.

It is therefore apparent that there is no loss of interest involved when such drafts (commercial sight) are purchased. Nor is the banker entering into any speculative commitment in making such a purchase since he may at the same time sell his own check for a like number of pounds. The difference between the bankers' sight and the commercial sight rates accordingly represents merely the profit that the foreign exchange banker makes on a given sale of funds in London. As shown in the table, this profit usually amounts to about $\frac{1}{4}$ cent per pound.

The spread between the bankers' sight and other commercial rates.—The spread between the bankers' sight rate and the rates on various types of commercial time drafts is largely a function of the maturity of the time drafts together with the rate of discount prevailing in the London money market. On the date for which the quotations in the preceding table are given (September 30, 1929), the rate of discount in the London acceptance market was quoted at $6\frac{1}{4}$ @ $6\frac{5}{16}$ per cent on prime ninety-day bills. With a bankers' sight rate of \$4.855, assuming that a prime bill can be discounted in the London market at $6\frac{1}{4}$ per cent, and bearing in mind that three days of grace are allowed in England in which to pay matured bills, the rate that an American foreign exchange banker would be willing to pay for a ninety-day D. A. bill for £1000 would be calculated approximately as follows:

Banker's sight rate	\$4.8550
93 days discount at $6\frac{1}{4}$ per cent	<u>.0773</u>
	\$4.7777

From this the banker must also deduct a stamp tax of 10s. which amounts to $\frac{1}{20}$ of 1 per cent on a £1000 bill, or \$0.002426. This reduces the rate to \$4.7753, which makes no allowance for a profit to the foreign exchange banker. Assuming a profit of $\frac{1}{4}$ cent on the pound and subtracting this amount, a rate of \$4.7728 is obtained. This approximates very closely the highest quoted rate in the table for ninety-day bills.³

³ The slight discrepancy between the calculated and the quoted rate may be due to the fact that the English banker extracts a slight commission for handling the transaction, or that the London discount rate on which the calculation was based was $6\frac{5}{16}$ instead of $6\frac{1}{4}$ per cent, or some combination of these and other factors.

In the preceding calculation, a specific rate of discount— $6\frac{1}{4}$ per cent—was used. It would appear that, if the rate in the London market should rise or fall between the time that the American banker buys the bill and the time it is discounted in the London market a week to ten days later, the banker would lose or gain accordingly. Actually, however, the London foreign exchange bankers furnish their American correspondents daily with an arrival rate of discount. This is the rate at which the British bankers agree to discount bills purchased by American correspondents on a specific date, regardless of what rate may prevail in the London market when the bills actually arrive there. The American foreign exchange banker, accordingly, is able to calculate an exact rate for time bills without making any speculative commitment whatsoever.

As would be expected from the foregoing explanation, the table indicates that the longer the maturity of the bill, the lower is the price per pound that the banker will pay for it. Thus the rate is higher for sixty-day than for ninety-day bills, and still higher for seven-day grain bills. As D. P. bills cannot be discounted in the London market, the rate on such bills is usually slightly lower than on D. A. bills of the same maturity, although when a banker knows from experience that D. P. bills on certain drawees will be taken up before maturity a better rate may be offered than would otherwise be the case.

Since the chief item involved in the spread between the commercial rates and the bankers' sight rate is the discount rate in the London market, it is clear that changes in the latter rate are of considerable importance in determining the cost of financing through London. To illustrate, the rate of discount on ninety-day bills in the London market on April 16, 1931, was $2\frac{5}{8}$ per cent. On the same date the bankers' sight rate in New York on London stood at \$4.85656 while the buying rate on ninety-day bills (prime commercial) was \$4.82188. The spread between these two rates was accordingly \$0.03468 per pound as compared with a spread of from \$0.07875 to \$0.08250 per pound on September 30, 1929, when the discount rate in the London market stood at $6\frac{1}{4}$ @ $6\frac{5}{16}$ per cent.

The basic rate of exchange.—Of the rates so far discussed, the bankers' sight rate is fundamental or basic. It is the rate meant when referring to "the rate of exchange" on any foreign country. The reason for this has already been implied. When the foreign exchange banker buys commercial bills on *Englishmen*, he is purchasing claims to funds in England against which he can sell his own drafts at the same time without losing interest or making any speculative commitment, since the funds obtained from the collection or discount of the commercial bills will furnish cover for his own drafts.

The cable rate, on the other hand, as well as the rates on commercial bills, is fixed in relation to the bankers' sight rate. If the bankers' sight rate rises, all the other rates will rise in proportion, assuming no change to have occurred in the London discount rate. The bankers' sight rate also, as will be shown shortly, is the rate that governs gold movements from one country to another. Accordingly, although some authorities have maintained that the cable rate was fundamental, it seems clear that the bankers' sight rate is really the basic rate of exchange.

The supply of bills.—Four methods by which the foreign exchange banker may increase his supply of funds abroad have been noted in an earlier paragraph, and it was there pointed out that the most important of these was the purchase of bills from those who had claims to payment in foreign countries. It must be emphasized in this connection that such bills may arise out of a wide variety of international commercial and financial transactions. Any payment due to Americans from foreigners has the effect of increasing the supply of foreign exchange.⁴ Thus the payment for services rendered by Americans, the payment of interest or dividends on American-held foreign securities, etc., tend to increase the supply of exchange in the same fashion as the payment for commodities purchased. The following list gives the chief sources of the supply of claims against foreigners. In every instance, it will be noted, a payment must be made by the foreigners to someone in the United States.

⁴ But see pp. 643-44.

1. Exports of commodities
2. Sales abroad of American securities
3. Payment of interest or dividends on American-held foreign securities
4. Short-time loans placed by foreigners in the American money market
5. Shipping, insurance, and other services furnished by Americans to foreigners
6. Repayment of debts to Americans
7. Foreign tourist expenditures in the United States
8. Remittances by foreigners to friends or relatives in America

The demand for exchange.—The demand for foreign funds, on the other hand, occurs whenever Americans have payments to make in foreign countries. In general, the transactions that give rise to a demand for foreign exchange are just the reverse of those effecting an increase in the supply. They may be listed as follows:

1. Imports of commodities
2. Purchase of foreign securities
3. Payment of interest or dividends on foreign-held American securities
4. Short-time loans placed in foreign money markets
5. Shipping, insurance, and other services furnished by foreigners to us
6. Repayment of debts to foreigners
7. American tourist expenditures in foreign countries
8. Remittances by immigrants and others to foreign friends or relatives

Qualification of preceding explanation.—From the foregoing explanation it would appear that every payment from Americans to foreigners would tend to raise the rate of exchange by decreasing the American foreign exchange bankers' supply of funds abroad and that every payment by foreigners to Americans would tend to lower the rate by increasing the supply of funds abroad. As far as the effect of such payments on the rate of exchange is concerned, this is precisely what happens. It may be, however, that payments by, say, Englishmen to Americans may affect the rate of exchange by decreasing the supply of English balances in the United States instead of by increasing the American bankers' supply of funds in England.

To illustrate this point, suppose a considerable amount of payments to this country to be made by English debtors by the purchase in London of dollar drafts drawn by London

bankers against their New York accounts. These dollar drafts would be sent over to the American creditors and would be collected from the New York banks holding the English balances. This would decrease the English bankers' supply of dollar exchange and would tend to raise the rate of exchange *in London on New York*. A high rate of exchange in London on New York, however, is the same as a low rate of exchange in New York on London. This fact is confusing to the uninitiated and requires explanation.

The rate of exchange in London on New York is quoted in dollars and cents per pound and is accordingly exactly the same in both centers. But a rate of \$4.84 in London is a high rate, because it means that English buyers of dollars can get less dollars and cents per pound than would be the case if the rate were \$4.88. Stated differently, an Englishman wishing to purchase a dollar draft for \$5000 at a rate of \$4.84 would have to pay approximately £1033 for it, whereas, if the rate were \$4.88, it would cost him a little less than £1025. To the American who is buying pounds, on the other hand, a rate of \$4.84 is lower than a rate of \$4.88.

To the extent, then, that payments to Americans are made to Englishmen (or other foreigners) in dollars, the effect will be to lower the rate in New York on the foreign country through decreasing the foreign balances held in New York instead of through increasing the foreign balances of American bankers. In any event, however the payment may be made, the effect of payments to us by foreigners is to lower the rate of exchange on the foreign country, while payments by us to foreigners have the opposite effect.

Limits to exchange rate movements.—Although variations in the supply of and demand for funds abroad are the immediate cause of changes in the exchange rates on foreign countries, the range of fluctuation of the rate of exchange on any particular country is sharply limited by the cost of shipping gold. To take a specific example, the rate of exchange in New York on London will vary only between the limits fixed by the cost of shipping gold from New York to London or from London to New York.

Consider first the conditions under which gold will be

exported from this country to England. Suppose the demand for sterling exchange to have been active with a comparatively small supply of bills on England coming into the market. With the demand in excess of the supply at the rate prevailing earlier, the rate of exchange on London would have to rise in order to equalize the demand for and supply of funds in England at a higher rate. This increase in the rate for sterling exchange, if it brings no additional supply of bills into the market, will continue until the rate reaches a point at which it will be profitable to ship gold to England.

For purposes of illustration, let us assume that the cost of shipping gold to London from New York amounts to 2 cents per pound sterling. The mint par of exchange on England, as determined by the relative amounts of fine gold in the pound and the dollar, is \$4.8665.⁵ To get the amount of gold contained in a pound will cost the banker \$4.8665. Assuming that the foreign exchange banker operates on a profit of $\frac{1}{4}$ cent per pound, it would be profitable for him to ship gold when the bankers' sight rate reaches \$4.8890 ($\$4.8665 + .0025$). Viewed from a slightly different angle, he would not offer more for bills or claims against England than a price that is the equivalent of \$4.8865 after such bills have been sent over to England and discounted, for it would be cheaper to ship gold than to pay a higher price than that mentioned for bills.

The conditions surrounding the importation of gold are practically the opposite of those just described in connection with gold exports. Again assuming a figure of 2 cents to cover the cost per pound of shipping gold, the net amount in dollars and cents obtained by the importing American banker would be \$4.8465 per pound ($\$4.8665 - .0200$). Since the foreign exchange banker can also obtain dollars through the sale of his sight drafts—on which he makes a profit of, say, $\frac{1}{4}$ cent per pound—it would clearly not be profitable to import gold as long as the bankers' sight rate remains above \$4.8440 ($\$4.8465 - .0025$). On the other hand, it

⁵ The pound contained 113.0015 grains of fine gold as compared with 23.22 grains in the dollar before 1932. Thus the amount of gold in the pound was $113.0015 \div 23.22 = 4.86656$ times the amount in the dollar.

would not be profitable for the banker to sell sight drafts at any figure below \$4.8440, since gold could be imported at a profit of $\frac{1}{4}$ cent per pound when the rate reached that point.

Variations in the cost of shipping gold.—In the foregoing examples it has been assumed that the cost per pound of exporting gold to England or of importing gold from England was exactly 2 cents. Actually, such an assumption is not justified. The cost of shipping gold is an aggregate of a number of costs, practically all of which are more or less variable. The chief costs that enter into gold shipments are those of assaying, packing, freight, insurance, and interest. The first two of these are normally fairly steady, but freight and insurance may vary considerably from time to time, while interest rates are also subject to rather wide, and at times rapid, fluctuations.

To show the extent to which changes in these costs may effect changes in the gold export or import points, the following calculations by Dr. Paul Einzig are presented:⁶

	<i>Gold Import Point</i>	<i>Gold Export Point</i>
1913	\$4.8509	\$4.8900
1925	4.8491	4.8949
1928	4.8515	4.8884

From these calculations is it apparent that there has been a tendency for the spread between the gold points to narrow somewhat since England's return to the gold standard in 1925. In January 1930, the spread between the theoretical gold points, as calculated by the Federal Reserve Bank of New York, was slightly smaller than that computed by Einzig for the end of 1928.⁷ Apparently, a cost of somewhere near $1\frac{1}{2}$ cents per pound for shipping gold between New York and London may be considered about normal under conditions just prior to 1932.

Variations in export and import points in relation to par.—It will be noted from Einzig's calculations that there is a wider spread between par and the gold export point

⁶ *International Gold Movements*, pp. 94-95. Since Einzig's calculations are from the standpoint of the English market, we have here reversed the figures as the English import point would be our export point and vice versa.

⁷ As nearly as can be estimated from a chart published in the *Monthly Review* of the Federal Reserve Bank of New York, March 1, 1930. The exact figures, as computed by the Reserve bank, are not given.

than there is between par and the gold import point. This is normally the case and is explained by the fact that, whereas the buying and selling prices of gold in New York were identical at \$20.67183 per fine ounce, the Bank of England had a minimum buying price of 84s. 9.81818*d.* and a selling price of 84s. 11.45455*d.* per fine ounce. Thus gold shipped from New York to London was normally taken in London at the Bank's minimum buying price, or at a rate of \$4.87439 per pound, while gold taken for shipment from London to New York was obtained at the Bank's selling price, or at a rate of \$4.86656, the mint par.

Exceptions to this normal relationship between the gold points and par may be observed upon occasion as a result of special circumstances. An instance of this sort occurred, for example, in the closing months of 1930, continuing into 1931. For that period, the calculated theoretical gold export point stood just under \$4.88, a figure that was nearer to par than was the theoretical gold import point.⁸ This can be explained only by a buying price for fine gold bars in the London market higher than the minimum price of the Bank of England. The reason for this higher buying price was probably the fact that after May 31, 1930, the Bank of England ceased to pay out fine gold, delivering only standard gold of a fineness of 916 $\frac{2}{3}$, which required refining before it would be accepted by certain continental central banks—particularly the Bank of France—to which it was ultimately sold.⁹ Later, when the continental central banks in question altered their policy and began to accept gold of the English standard of fineness, this unusually high buying price for fine gold in London disappeared. Thereafter the theoretical gold export point resumed its normal position in relation to par.¹⁰

Significance of theoretical gold points.—Theoretical gold export and import points of the sort described may be calculated for any two gold standard countries on the basis of the current cost of shipping gold between the two countries, the buying and selling price of gold in the financial

⁸ As shown in a chart in the *Monthly Review* of the Federal Reserve Bank of New York, February 1, 1931, p. 12.

⁹ See Einzig, P., *The Fight for Financial Supremacy*, pp. 110-11.

¹⁰ Since the departure of England from the gold standard on Sept. 21, 1931, the gold import point has ceased to function.

center of each country, and the prevailing rates of interest in each center. Obviously, however, such calculations furnish merely close proximations to the points at which gold will actually be shipped. At times banks engage in gold shipments without profit for advertising or other purposes, thus bringing about the movement of gold at figures inside the calculated gold points. Again, banks may ignore loss of interest in figuring the cost of shipping gold. An American bank, which is exporting gold to England to build up its London balance, may, for example, properly omit interest from its calculations of shipping cost since drafts on London may be sold at the time the gold is shipped, the gold arriving in England simultaneously with the drafts and furnishing cover for them. On the other hand, a bank importing gold may look on the shipment as a part of its reserves and so omit interest in calculating the cost of importing gold.

In spite of the impossibility of computing an exact rate at which gold will move into or out of a country, calculated theoretical gold points are significant. By means of them it is possible for the market to judge very closely, if not exactly, the rates at which gold will be shipped and to govern its actions accordingly.

Exchange rates between gold and silver standard countries.—Exchange rate fluctuations between two countries, one of which is on a gold and one on a silver standard, are not as accurately predictable as to extent as in the case between two gold standard countries. The reason for this will be clear upon a moment's consideration. In the gold standard country, silver is a commodity and its price fluctuates in the same manner as the price of any other commodity. In the silver standard country, on the other hand, the money unit consists of a fixed weight of silver. Therefore, as the price of silver varies in the gold standard country, the cost of obtaining silver to ship to the country on the silver standard will fluctuate accordingly.

To illustrate this simply, consider a gold standard country with a gold dollar of 24 grains and a silver standard country with a silver dollar of 360 grains. Suppose, further, that the price of silver in the gold standard country is \$1.00 per ounce. Clearly, to obtain one unit of the silver standard

country's money will cost 75 cents in the gold standard country. If now the price of silver in the gold standard country falls to 50 cents per ounce, the cost of one unit of the silver standard country's money will be only 37.5 cents. The rate of exchange on the silver standard country will decline in proportion since no one would pay more than 37.5 cents plus shipping costs for drafts on the silver standard country. From the point of view of the silver standard country, of course, the situation will be just the opposite, the rate on the gold standard country rising by 100 per cent as a result of the change in the value of silver relatively to gold.

As a matter of fact, the matter of exchange rates between gold and silver standard countries in the gold standard era prior to 1932 was of practical significance only in connection with exchange rates on China in the various gold standard countries, China being the only country of any importance then on the silver standard.

Conclusion.—This chapter has been concerned with the determination of exchange rates under the gold standard. The following chapter will attempt to show how this standard, operating through the foreign exchange markets, worked to attain international monetary equilibrium.

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CHAPTER 29

GOLD MOVEMENTS AND THE WORLD VALUE OF GOLD UNDER THE GOLD STANDARD

Introduction.—Between the 1870's and World War I, the gold standard was in general use throughout the civilized world and was considered by the majority of monetary theorists, as well as by practical men of affairs, to be the best standard available. The advent of World War I, with its attendant currency disorder, naturally focussed attention on monetary affairs and, because of its previous satisfactory performance, a return to the gold standard was decided upon and put into effect by the major countries after the war was over. The result was that, by 1928, the gold standard was again in practically universal use. In this later period, however, the standard failed to function with its accustomed prewar efficiency, and in the closing months of 1931 a large number of countries found it either necessary or expedient once more to depart from gold as a standard of value. Any consideration of a return to the international gold standard, or some modified form of it, was made impossible by the outbreak of World War II.

Since the present chapter is concerned chiefly with the operation of the international gold standard under relatively normal conditions, the principles and forces discussed in the following pages will for the most part apply to the pre-1914 era. Toward the end of the chapter, however, an analysis of the reasons for the breakdown of the standard in the interwar period will be presented, since it will be helpful later on when we come to consider (in Chapter 35) the present-day problem of international monetary stability.

The pre-1914 gold standard.—The full gold standard is in existence in any given country when that country redeems all of its moneys in gold, placing no obstacles in the way of the use of the gold so obtained either in the arts or for

export to other countries, and when gold is freely and gratuitously coined or is freely exchanged for one or more of the moneys of the system. In short, so long as a free flow of gold both into and out of the monetary stock is permitted, a full gold standard exists.

Under the conditions set forth in the preceding paragraph, the functioning of the international gold standard is largely automatic and reciprocal. If prices rise in one country out of proportion to the rise in prices in other countries, gold will tend to flow from the former to the latter. The outflow of gold from the first country tends to contract the circulating medium of that country and through a series of reactions to be considered directly, to reverse the conditions that caused the export of gold. In the country or countries receiving the gold, on the other hand, exactly opposite reactions are set up that also work in the direction of stopping or reversing the inflow of gold. Thus gold tends to be distributed automatically in accordance with the need for it.

In the pre-1914 period, the gold standard functioned fairly satisfactorily in the manner indicated. Such artificial control of gold movements as was practiced by the Bank of England, and other central banks, was in the direction of giving effect to gold movements rather than offsetting them, the central bank's gold reserve being used as a criterion of credit policy. Although the foreign loans and investments of some countries were large, this factor did not interfere appreciably with the effectiveness of gold movements as the chief creditor countries did not try to prevent interest and debt payments being made in goods by raising tariff barriers against imports. Accordingly, the international movement of goods, which was governed largely by price movements of international goods and services, determined the direction and extent of major gold movements. With this general statement, we may proceed to a detailed consideration of the forces governing gold movements under this standard.

PRINCIPLES GOVERNING GOLD MOVEMENTS

Disproportionate changes in price levels.—Gold movements, resulting as they do from the self-interest of the foreign exchange bankers, are determined by the relation

between the demand for and the supply of funds abroad, and we have seen that the most important forces affecting the supply of and demand for foreign funds are those connected with the exportation and importation of goods.¹ It thus happens that changes in prices play an important part in the determination of gold movements, for if prices rise in one country while remaining practically unchanged in other countries, exports from that country will tend to fall off—diminishing the supply of funds abroad—and imports will tend to increase—increasing the demand for funds abroad. This will cause the rates of exchange on foreign countries to rise to points sufficiently high to make the export of gold profitable, whereupon such export will ordinarily take place. This may be summed up in the form of a principle to the effect that *gold tends to flow out of a country where the price level of foreign commodities has risen out of proportion to the rise in the corresponding price levels of other countries with which it has trade relations.*

Gold outflow will not continue indefinitely.—There is no need to fear, however, that such an outflow of gold will continue indefinitely, for the loss of gold itself sets up conditions that will automatically remedy the situation. It has already been shown that a rising rate of exchange brings into action forces that tend to bring it back to par by increasing the profitability of exporting goods and decreasing the profitability of importing goods. But if the rate rises to the point where gold exports become profitable and actually take place, still other forces are set to work that will stop the outflow of gold sooner or later.

(1) The shipments of gold out of the country will result in a decrease in bank reserves and a withdrawal of funds from the short-term loan markets—the call loan market, the acceptance market, etc.—where the surplus funds of the banks are ordinarily invested. (2) This will raise short-term money rates (i.e., interest and discount rates) sharply. (3) The higher money rates will attract short-term funds from other countries where rates are lower, or at least will prevent the further withdrawal of such funds by foreign

¹ Goods must here be understood to include all goods and services that enter into foreign trade.

countries, and (4) this will cause the rate of exchange to fall and stop the outflow of gold. The high money rates will also, usually, tend to decrease speculative buying of securities and staple products, which is largely conducted on borrowed funds. This tends to result in a fall in the prices of securities and staples, thus encouraging foreign buying of these items. The foreign purchases of securities and staples increase the supply of funds abroad and add to the forces tending to lower the rate of exchange below the gold export point.² If the inflow of foreign funds and the purchase of securities and staples by foreigners proceed to sufficient lengths, the rate of exchange will fall to a point where gold will be imported. This will not always occur, it is true, but that the outward flow of gold will be stopped is fairly certain.

To assume an extreme case, however, let us suppose that the above forces are not sufficient to bring about a cessation of the gold outflow and that the yellow metal continues to leave the country. Eventually, bank reserves will be depleted to the point where a general deflation of bank credit will be necessary. When this time arrives, there will result a general fall of prices that will continue until it is no longer profitable to export gold and the outflow will cease. A steady drain of such proportions is not at all likely to occur in practice, as the other forces mentioned would stop the outflow, in all probability, before it had attained such magnitude, but it has been discussed for the purpose of showing that *there is no danger of a continual loss of gold from a country of such duration as to result in a complete drawing away of its monetary stock.*³

World gold stock distributes itself according to need.
—As following from the preceding observations, a generali-

² In times of speculative mania, such as occurred in the United States in 1929, prices of securities may continue to rise for a time in spite of the high money rates. But if the speculative fever spreads to foreign countries, these securities will be purchased by foreigners in spite of the high prices. In 1929, the United States imported large amounts of gold at a time when security prices were rising rapidly.

³ It is not necessary to go through the reactions that would prevent a country from importing gold continuously until its monetary gold stock was entirely out of proportion to its needs. In general, they would be just the opposite of those that prevent an undue export of gold. However, the fact that the business community may refuse to make use of the imported gold for spending purposes (or as a basis for credit expansion) may prevent prices from rising as they otherwise would, and so allow more gold to be imported at times than is at all necessary or desirable.

zation may be formulated to the effect that *the monetary stock of gold tends to distribute itself among the gold standard countries in proportion to the need for it*. This is, of course, a long-run principle. If the economic productivity of a given country is on the wane and the amount of monetary gold remains unchanged, the price level will rise and gold will flow out of the country, but, under the conditions mentioned, the old stock of gold is larger than necessary to carry on the diminished volume of trade. On the other hand, if the productivity of a country is rapidly increasing without some increase in the monetary gold of the country, prices will tend to fall and additional gold will be attracted in that direction. Methods of economizing in the use of gold, such as the development of the check system, etc., may prevent gold movements into the country that would otherwise take place, but, after all, the country where such economies have occurred has less need for gold than other countries that have not adopted the more efficient methods of exchange, so that the fact that gold does not move into such a country so rapidly as might be expected is not contradictory to the statement of this principle.

Net gold movements referred to.—It should be understood that the term *gold movements*, as it has been used in the preceding discussion, refers to net movements of the metal. If the United States imports \$21,000,000 in gold in a certain month from some countries and exports \$10,000,000 in gold to other countries during the same month, the net gold movement is \$11,000,000 into the United States for the month in question. In considering any long-time distribution of monetary gold among the countries of the world, a year is the shortest period that should be used in the calculation of net gold movements for the reason that many imports and exports of gold are seasonal in nature and occur at different times of the year. Thus, prior to World War I, there was a customary excess of goods exports to European countries in the fall of the year that ordinarily resulted in a net inflow of gold into the United States during those months, while, in the spring of the year, imports of goods tended to be in excess of exports and gold frequently left the country in significant amounts. In so far as the

spring outflow of gold was offset by the autumn inflow, there was no permanent effect on the stock of gold of the United States. Such movements of gold were important in many respects, but not in effecting a permanent redistribution of the world's monetary gold stock, for they took place when the relative price levels of the United States and other countries had remained practically unchanged; they were purely seasonal movements; and they offset each other almost entirely.

Other tendencies.—One or two other tendencies should be mentioned before this survey of gold movements is brought to a close. *If any given country issues any considerable quantity of legal tender credit money, gold tends to be displaced and to leave the country.* This occurs because of the inelasticity of government legal tender credit money. If the volume of trade decreases, such issues of paper or credit money fail to contract, since there is no particular motive for redeeming it. The quantity of money then becomes excessive and gold is shipped out of the country, as it is the only acceptable means of international payment, while the legal tender credit money, which cannot be used to pay foreign balances, remains in the domestic monetary stock and takes the place of the exported gold. This is to be distinguished from an increase in the quantity of credit money through the development of a check currency. To a certain extent, the latter may be said to prevent gold from flowing into the country to the degree that it otherwise would, and it does this by keeping the price level from falling, but, as it contracts somewhat in times of decreased business activity, it is seldom responsible for a displacement of gold such as occurs when a redundancy of government legal tender credit money is brought into existence.

Barring unduly great and lasting changes in the price level of a given country as compared with those of other nations, *the exports and imports of gold over any long period of time tend to counterbalance each other*, so that there is no material net change in its gold supply. Exceptions must be made, however, of countries that produce no gold within their limits and those that produce an amount of gold greatly in excess of their own monetary needs. There will

tend to be a more or less continuous net export of gold from the latter countries and a net import of gold into the countries of the former group. In the large gold-producing countries, prices will tend to be high and the rate of exchange will tend to be at the gold export point a good deal of the time. Conversely, in the countries that produce no gold, prices will tend to be lower and these countries will therefore tend to import more gold than they export in the long run. This is really a part of the general principle that the gold stock tends to be distributed in accordance with the needs of the different gold standard countries, and need not detain us further.

THE ARTIFICIAL CONTROL OF GOLD MOVEMENTS

The necessity for artificial control.—Up to this point the discussion has centered around the largely automatic movements of gold from one country to another, and its distribution among different countries. While, as has been shown, there is no danger of the complete loss of a country's monetary gold stock through exportation and while, in the long run, a country may anticipate retaining or acquiring as much gold as it really needs in relation to the needs of other countries, it is nevertheless true upon occasion that such a loss of gold as would take place under the working of automatic forces would disrupt the smooth working of a given country's credit system and lead to serious immediate consequences. In such circumstances, at least a measure of artificial control over gold movements is desirable.

Present powers of the Federal Reserve banks.—This fact was recognized in the United States at the time of the passage of the Federal Reserve Act with the result that the act conferred upon the Federal Reserve banks certain powers that would provide them with some control over gold movements. The section of the act that regulates the open-market operations of the Reserve banks provides that "every Federal Reserve bank shall have the power:

"(a) To deal in gold coin or bullion at home or abroad, to make loans thereon, exchange Federal Reserve notes for gold, gold coin, or gold certificates, and to contract for loans of gold coin or bullion, giving therefor, when necessary,

acceptable security, including the hypothecation of United States bonds or other securities which Federal Reserve banks are authorized to hold;

“(b) To buy and sell, at home or abroad, bonds and notes of the United States . . .”—*Federal Reserve Act*. Sec. 14.⁴

The usefulness of such powers, when placed in the hands of central banking institutions like the Federal Reserve banks, which are not operated primarily for profit, is beyond question. Gold may be purchased abroad and imported at a loss if such action is necessary to protect the reserve position of these banks. Or, if it is not desired actually to import gold, but merely to prevent its exportation, it is possible either to buy or to borrow gold abroad and have it credited to the foreign accounts of the Reserve banks. This constitutes a supply of funds abroad that may then be sold to foreign exchange bankers at a rate sufficiently low to prevent them from drawing out gold from the Reserve banks for export.

In a country that has an international market for short-time loans, the regulation of the rate of discount by the central bank may be of importance in preventing an outflow of gold from the country. By selling securities in the market and raising its rate of discount, the central bank may frequently bring about a higher rate in the discount market, and a high rate in the latter market tends to make it more profitable for foreign bankers to allow their funds to remain there to be loaned out at the high rate than to withdraw them in the form of gold to their own countries. It is, of course, essential that foreign bankers shall have funds invested or on deposit in the center in question before the use of the discount rate for this purpose will prove effective. The Bank of England was formerly in a favorable position in this respect, for London held the position of world financial center for many years. This means that bankers from all parts of the world maintained deposit accounts in London, so that an increase in the possible return to be obtained from leaving these deposits in London had the effect of preventing, for a time, some of the exports of gold that would otherwise have taken place.

⁴ These powers were restricted by the Gold Reserve Act of 1934

Control of gold movements in the United States.—The position of the United States in this regard has undergone some marked changes in comparatively recent years. Before World War I, not only was there no central banking structure in this country, but very few foreign deposits as well. American exporters and importers, as contrasted with English houses engaged in foreign trade, had to take the initiative in making both collections for goods sold and payments for goods bought. Further, there was no highly developed open market for commercial paper in New York in which foreigners could readily lend funds if they had them available in this country for that purpose. As a consequence, high money rates in the New York market did not offer the same obstruction to gold exports that similar rates in London were likely to do.

After the establishment of the Federal Reserve System, there was no opportunity to use the powers bestowed on the Federal Reserve banks for the purpose of manipulating gold movements throughout the war period. After the crisis and depression of 1920-1922, however, the Reserve banks attempted to exert some control over gold movements, although their efforts were largely in the way of preventing excessive imports of gold and thus aiding in the re-establishment of the gold standard by European countries. It is probable, for example, that the action of the Reserve banks in creating exceedingly easy money conditions in the New York market in 1924 was with an eye to preventing further gold imports from England, thus making it easier for that country to arrange for its return to the gold standard. Again, in 1927, the Reserve banks purchased \$60,000,000 of gold, which was held temporarily in London and thus could not be imported into this country. Later in the year, through heavy purchases of securities in the open market and the lowering of their discount rates, the Reserve institutions created extremely easy money conditions in New York with the result that there was a net export of gold from the country at a time of year when imports of the metal are most likely to occur.⁵ The Reserve banks have also participated in extend-

⁵ For a description of the gold policy of the Federal Reserve banks during 1927, see the Annual Report of the Federal Reserve Board, 1927, pp. 9-11.

ing gold loans at various times to countries that were stabilizing their currencies and returning to a gold basis. These were abnormal conditions, it is true, for the central bank is usually more concerned with preventing an outflow than an inflow of gold. Nevertheless, there is no reason for thinking that the Reserve banks will not be able to exert a significant amount of control over gold exports, if the time arrives at which such pressure is needed. The post-World War I period saw a large increase in the number and size of foreign balances that are maintained in New York banks, as well as the development of a substantial market for bankers' acceptances, and some ability to control future gold exports through the manipulation of discount rates by the Reserve banks—especially the Federal Reserve Bank of New York—seemed probable. At all events, it is certain that the Federal Reserve banks were endowed with adequate powers to protect their reserve positions and the safety of the credit structure by preventing the immediate loss of unduly large quantities of gold.

Desirability of artificial control.—In passing judgment on the desirability of artificial control of gold movements, it is necessary to analyse the conditions under which control is exerted and the purpose of the measures employed. In general, the operation of the international gold standard, to be satisfactory, should be automatic and reciprocal. That is, the loss of gold from one country should exert a contracting effect on that country's credit structure and put an end to the gold outflow as already described, while the inflow of gold to the receiving country should exert an expansive effect that would also operate to stop or to reverse the flow of gold.

When the gold movement is the result of natural economic and commercial forces, any artificial control should be in the nature of measures to enhance the natural effect of the loss or gain of gold, as the case may be. For example, if the United States were to lose gold under the circumstances described, the proper action for the Federal Reserve banks to take would be to raise discount rates and sell securities in the open market. When member banks draw down their accounts at the Federal Reserve bank to obtain gold for export, their reserves are reduced and the market is automatically

tightened. If, in addition, the Reserve banks sell securities, member banks' reserves are reduced still further and the natural tightening effect of the gold export is thereby enhanced. Conversely, when gold is being imported, the Reserve banks should lower rates and buy open market securities to heighten the natural easing effect of the gold imports. Artificial action of this sort, by enhancing the natural effects of gold movements, tends to hasten the readjustment and to put a stop to the flow of gold.

Upon occasion, however, gold movements of large magnitude have resulted from the shifting of balances from one center to another purely because of a loss of confidence in the center losing the funds. The loss of some \$700,000,000 in gold from the United States in the six weeks following England's departure from the gold standard in 1931 is a case in point. Such movements are not the result of normal economic forces and require different treatment. In 1931, for example, the Reserve banks bought bills in the open market in the amount of approximately \$400,000,000, which offset a corresponding loss of gold as far as member bank reserves were concerned.

It may be concluded, then, that central banks should give effect to normal commercial movements of gold, but, if in a position to do so, should offset—at least in part—abnormal movements resulting from hysteria and loss of confidence.

DEVALUATION AND GOLD MOVEMENTS

Exchange effects.—It has been explained that, when the world's leading countries are on the gold standard, price levels are forced into equilibrium with each other through gold movements from one country to another. If, after such an equilibrium has been attained, one country reduces the weight of gold in its monetary unit, that country's currency is said to be undervalued in relation to the currencies of the other gold standard countries, and gold will tend to flow into the country with the undervalued currency.

An illustration of this type of gold movement is afforded by the experience of the United States after the dollar was devalued in January 1934. Prior to the inauguration of President Roosevelt, the franc was worth 3.92 cents, in terms

of the old dollar. After the devaluation, when the government stood ready to buy and, under certain conditions, to sell gold at \$35.00 per ounce, the par of exchange on France was shifted to 6.66 cents. At the old par, an American-made automobile priced at \$1000 would cost a French buyer roughly 25,500 francs. At the new par, the same \$1000 automobile could be obtained for about 15,000 francs. Clearly, it would be highly desirable from the French buyer's point of view to purchase American goods after the devaluation.

It is also clear that goods imported into the United States from France would advance in price. An article priced at 2500 francs would have cost about \$100 at the old par of exchange, but would be worth approximately \$170 at the new par. As a result, imports from France tend to fall off, while exports to France are correspondingly stimulated. The effect of this is to start a flow of gold from France to the United States.

Extent of gold movement.—The extent of a gold movement occurring as a result of devaluation depends upon two factors, provided that no artificial restrictions are placed on the movement of goods and funds from one country to the other. These two factors are, first, the extent to and rapidity with which prices rise in the country where the currency has been devalued, and, second, the extent to and rapidity with which prices fall in other gold standard countries. Obviously, if the prices of automobiles and other goods exported from the United States had immediately risen upon devaluation by 70 per cent, the cost in francs would have been the same after the devaluation as before. Similarly, if the prices of French goods had receded 40.94 per cent, the cost of such goods in dollars would not have increased.

As a matter of fact, American prices did not rise by any large percentage in 1934, nor did French prices fall by anything like 40.94 per cent. Consequently, the United States imported over \$260,000,000 of the new weight from France in the course of the year, and over \$1,000,000,000 from all countries, a movement that continued into 1937.

This explains why depreciation or devaluation of the currency on the part of a number of countries puts pressure to deflate on other countries that retain their gold units un-

changed. Even if the latter have ample reserves, exports to foreign countries will fall off and unless or until they can lower their prices to compete with foreign countries, they will not regain their export markets. Eventually, also, unless they rigidly restrict imports, they will be forced to depart from the gold standard entirely.

Countries retaining their former gold units of course have the option of devaluing these units in order to bring them into line with other currencies and so avoid deflation. The practical difficulty here, however, is that there is usually a tendency to undervalue their currencies under such circumstances in order to obtain an exchange benefit. This may easily lead to competitive currency depreciation throughout the world, which can only end in complete demoralization.

Postwar gold movements abnormal.—Between 1925 and 1928, most of the great countries of the world returned to the gold standard after having been on an irredeemable paper money basis since the outbreak of World War I. This standard was generally retained until 1931, after which there was again a general departure from gold involving all but a few countries. The operation of the gold standard during this period, however, was anything but normal. In discussing the factors determining the world value of gold in the following section of this chapter, therefore, we shall revert to the pre-1914 period when conditions were less chaotic, although reference will be made to some of these abnormal conditions on the world value of gold.

THE WORLD VALUE OF GOLD

The world demand for gold.—It has been shown that the use of credit money, both domestically and internationally, results in a lower demand for gold than would otherwise exist. Since the world value of gold is determined by the demand for it in relation to the gold stock, the use of credit money has the effect of holding down the value of the metal. The monetary demand of the world for gold is determined by the aggregate amount of goods and services that the different gold-using countries stand ready and willing to part with in exchange for gold for monetary purposes. In countries like the United States and England, where the widest

use of credit money has been resorted to, the demand for monetary gold, in relation to the amount of money work to be done, is less than in countries such as France, where the check system is only slowly coming into use. This means that, in the ordinary course of events, France stands ready and willing to offer a larger proportion of her wealth and income for gold than does the United States or England. This method of statement is, of course, figurative to a certain extent. Nations, as such, are not to be thought of as offering goods for gold in the ordinary case. What really happens is that, if a certain country ordinarily makes use of large amounts of gold coin for internal circulation purposes and insists on maintaining very large gold reserves, an increase in productive activity in that country will cause prices to fall and, barring a similar fall of prices in other countries, will result in an importation of gold. Since, by hypothesis, larger amounts of gold are needed to carry on a certain level of business transactions in this country than in others, with a given fall of prices more gold will have to be imported to bring about an adjustment of the price level to those of foreign countries than would be the case with a similar fall of prices in a country that economized in the use of gold through resort to an efficient system of credit money.

Purchasing power as applied internationally.—In speaking of the world value of gold, however, we must have in mind the purchasing power of the metal over a somewhat narrower range of goods and services than would be included when looking at the domestic value of a given country's money. If all goods and services were capable of being transported from one country to another without cost, the world value of gold would coincide with the domestic value in each gold standard country but the fact that such is not the case means that a change in the general price level of one country may or may not result in shipments of gold into or out of that country in proportion to the alteration of its price level as compared with those of other countries. Consequently, it is changes in the price level of commodities, services, and securities, which do enter into foreign trade, that determine the direction and extent of gold movements among the gold standard countries. In other words, it is

the price level of those goods that have a world market that must be taken into account in considering the world value of gold. With this idea of the value of gold in mind, it is correct to say that the value of the metal in any of the gold-using countries cannot vary by much more than the cost of shipment to other countries without resulting in a movement of gold from one country to another that will continue until its value, within the limits set by transportation costs, is the same in all the countries under consideration.

The demand for gold and the demand for money.—It has been noted previously that, within a given country, the demand for money is not identical with the demand for gold where various forms of credit money are used. On the other hand, it has just been stated that, internationally, it is the demand for gold that is important (in conjunction with the supply, of course) in determining the value of money in the gold standard countries. Actually, there is nothing contradictory about these statements. If, in a given country, say the United States, the usual relation between the amount of gold held for monetary purposes and the total amount of money is 1 to 8, then an increase in the demand for money at a certain level of prices in the United States amounting to \$800,000,000, would constitute an increase in this country's demand for monetary gold to the extent of \$100,000,000. In other words, domestically or internationally, it is the demand of individuals for money that determines any country's demand for gold for monetary purposes. Of course, it is true that an elastic bank note and deposit currency will permit an adjustment in the supply of money to the varying needs of business from time to time and so prevent changes in the price level that might otherwise take place. This is a short-time factor that may prevent immediate shipments of gold, but that does not have a long-time or normal application. Over long periods, there tends to be a certain relationship between the amount of gold and the quantity of credit money, and any permanent increase in the demand for money will tend to result in a fractional increase in the country's demand for gold.

Changes in the demand for monetary gold.—The demand of any country for gold tends, then, in the long run, to

be determined by the customs and habits of the people and the attitude of the central bank and the state, together with the volume of trade. Before World War I, the demand for gold for money purposes on the part of France was large because the Bank of France insisted on maintaining a reserve of large proportions behind its note issues, and because the people of France preferred notes and specie to checks in making payment. The French people were also very thrifty and held rather large cash balances. A change in the habits of the French people, such as the introduction and use of a check currency coupled with decreased holdings of cash, would effect a large decrease in the demand for gold on the part of France.

Over any given period, however, there tends to be little change in the demand for gold resulting from changes in the monetary and banking habits of a country. Habits and customs do not change rapidly and, when the people of a country have become accustomed to certain methods of making payments, it is difficult to bring about any far-reaching change in these habits. This is not true of changes in the demand for gold as a result of increased economic productivity. The trend of the volume of trade in the more advanced countries was upward for many years prior to the war. This factor in the demand for money must therefore be taken into account in any attempt to explain changes in the world value of gold. With a few interruptions, however, the trend of economic development has been fairly regular at an increasing rate of about 3 per cent per annum and, if allowances are made for it, the fluctuations in the normal world value of gold will be found to have tended in the long run to vary inversely as the quantity and very nearly in proportion.

All this was changed with the advent of World War I. A tremendous decrease in the demand for monetary gold occurred in the majority of the belligerent countries. The necessities of war made goods in the form of munitions, supplies, etc., relatively more important in comparison with gold than formerly, and the countries concerned readily relinquished portions of their gold stocks in exchange for the needed goods. The concentration of gold in the neutral

countries, especially in the United States, combined with a decreased demand for gold in the latter country as a result of recent banking reforms, led to a marked decrease in the world value of gold. The dynamic elements introduced by that war continued to play an important part in determining the fluctuations in the world value of gold in the interwar period.

THE BREAKDOWN OF THE GOLD STANDARD

The gold standard in the interwar period.—The resumption of the gold standard by the leading countries of the world in the period of monetary reconstruction following the war was hailed by many as the crucial step in the direction of a return to normal conditions. The subsequent widespread breakdown of the gold standard, on the other hand, led many observers to believe that, through some unaccountable change, the standard had lost much of its prewar effectiveness and that a change to some other basis was accordingly indicated. In order to test the validity of the latter position, it will be necessary to ascertain the reasons for the failure of the gold standard to live up to its earlier reputation. The chief factors that interfered with the traditional functioning of the gold standard in this later period will accordingly be briefly discussed.

Lack of reciprocal action.—The reciprocal action that helped to make gold movements effective in the prewar period was often lacking in postwar gold movements. This was a result, in part, of the wide resort to the use of the gold exchange standard in the period of monetary reconstruction. To illustrate, if the Reichsbank, being allowed to count, as part of its required reserve, deposits in New York city banks, redeemed some of its notes in the form of a draft on a commercial bank in New York, its own reserve was reduced accordingly. In the United States, however, a deposit credit was merely transferred from the account of the Reichsbank to the account of the party receiving the draft, total deposits remaining the same as before. Consequently, no reaction tending to ease the credit situation in the United States occurred, the effectiveness of the loss of reserve by the Reichsbank being thereby cut in half.

Another factor tending to decrease the reciprocal action of gold movements was the failure of central banks, in many instances, to give effect to such movements. The Bank of England, for example, submitted to a long-continued loss of gold to the United States in 1928 and 1929 without raising its discount rate until it was absolutely necessary to do so, the object being not to restrict business any more than was necessary by raising rates. The Federal Reserve Board, on the other hand, being engaged in an attempt to curb the stock market boom, was tightening rather than easing credit in spite of the gold inflow. As a result, the natural reactions at both ends of the gold movement were in large part nullified by the action of the central banks concerned.

War debts and reparations.—The situation was also complicated by the necessity of making payments on intergovernmental debts contracted during the war and the payment of reparations by Germany. These payments had to be made to specific countries at specific times regardless of the state of international trade or the foreign exchange markets. Moreover, as the payments were relatively large and did not result from earnings on profitable investments, they naturally led to a considerable amount of confusion in the international exchange market, resulting often in unusual shipments of gold. The payment of these claims in goods might have been effected eventually, however, had it not been for another factor that must next be considered.

Interference with natural movements of goods.—Following the war, there was a widespread increase in tariff barriers in many countries. Some of these tariffs were raised during the period of irredeemable paper money in order to prevent too great an inflow of goods from countries whose currency was depreciating; but they were retained and, in many instances, raised further after the return of the majority of the countries to the gold standard. The United States, who was the chief beneficiary of the war debt payments, was probably the worst offender. By raising her tariffs, while yet insisting on the repayment of these debts, she took the course best calculated to prevent their payment in goods—the only method by which such payment could finally be made. Up to a certain point, of course, payments

could be made in gold, and the United States did receive large gold imports. The payments received, however, which were far in excess of the increase in gold stock, continued as long as they did because of another factor in the situation.

Improvident foreign lending.—The United States engaged in foreign lending on a wide scale by purchasing bonds issued in Germany, some other European countries, several South American countries, and elsewhere. The payment of German reparations (which, in turn, led to payment on war debts to the United States) was thereby made possible, while, at the same time, the United States was enabled to maintain an export balance of trade. Just as the extension of installment selling permitted the people of the United States to buy large amounts of goods out of future income, the extension of foreign credits by our businessmen, banks, and investors enabled foreigners to buy goods from us, for a time at least, without selling us an equivalent amount in return. Under the circumstances, any cessation of this policy of foreign lending was certain to give rise to grave difficulties.

Had nothing occurred to diminish the rate of foreign lending, the United States might have continued with an export balance of trade for some time. Eventually, the interest payments would have exceeded the new loans and the trade balance would have had to be reversed, a procedure that would have necessitated a reduction in tariffs. Unfortunately, however, many of the loans were improvidently made, and the proceeds were frequently used for improper or nonproductive purposes. As a result, any long continuance of the policy of foreign lending was improbable.

Inflexibility of prices.—Another factor of importance in explaining the failure of the gold standard to function in traditional fashion was the irresponsiveness of certain groups of prices to central banking control. The operations of various international cartels tended to make price movements inflexible in the goods controlled by these organizations. Attempts to control the price of various raw materials—rubber, sugar, silk, coffee, wheat, etc.—also interfered with the natural adjustment of prices to economic conditions. Finally, wages had become unduly rigid in some countries. The difficulties encountered by England after her return to the

gold standard in 1925 were largely the result of an inflexible system of wages, which could not be reduced to the extent necessary to permit England to regain her quota of export trade in competition with foreign countries. Central banking pressure led to reduced business and an increase in unemployment rather than to fundamental readjustments. Had England devaluated the pound upon her return to gold, this difficulty would have been largely eliminated. As it was, however, it played an important part in contributing to the ineffectiveness of gold movements into and out of England.

The question of confidence.—In addition to these underlying factors, the period was characterized by variations in confidence that resulted in the transfer of large sums from center to center upon the least provocation, quite irrespective of the movement of international trade, comparative rates of discount, and other forces that normally determine the distribution of funds in various financial centers. This factor, moreover, resulted in a plethora of short-term funds, which could be quickly recalled, and a relative scarcity of long-term funds, which were much needed for reconstruction purposes. The result was a utilization of short-term funds for long-term investment purposes, thus introducing a highly dangerous element into the situation in the event of a loss of confidence. The increase in short-term funds was accentuated by the extension of the gold exchange standard, and by the balances accumulated by the Bank of France in connection with the stabilization of the franc, the repatriation of the latter leading to abnormal and disturbing gold movements.

The final breakdown.—The immediate causes of the final breakdown of the international gold standard near the end of 1931 were a series of confidence crises brought about by the world depression. Even before the stock market break, the flotation of foreign securities in the American market declined sharply. After the crash in the stock market, foreign lending vanished almost completely. The countries that had been most dependent on loans from the United States were therefore hard put to it to obtain the funds needed to service their debts and to meet their other financial obligations in the way of reparations and war debt payments. Payments were met temporarily by the curtailment of imports

through exchange restrictions, by obtaining short-term credits, and by exporting gold. Attempts to develop an export surplus by the restriction of imports led to what amounted to forced sales of goods in foreign markets, thus depressing prices still further and leading to higher tariffs or other import restrictions in the buying countries. The exportation of gold was, of course, of limited duration, since it was impossible to meet payments indefinitely by this means and still maintain adequate reserves. The short-term commercial credits, upon maturity, could not be paid, it being necessary for creditor banks to arrange "standstill" agreements with the debtor countries to give the latter time gradually to liquidate these credits.

The failure of the Credit Anstalt in Austria under these strained conditions precipitated a confidence crisis that spread to Germany and, later, to England, the English banks being known to have had rather large commitments in the disturbed centers on the Continent. Large withdrawals of funds from England finally compelled the abandonment of the gold standard in September 1931, various other countries quickly following suit. Even the United States suffered a large loss of gold, but was not compelled to abandon the gold standard. Japan suspended the gold standard in December, leaving only some half-dozen important countries on a free gold basis at the end of the year.

Conclusion.—We have now considered the manner in which the gold standard operated, both under the favorable conditions prevailing prior to World War I, and under the less satisfactory environment of the interwar period. In the following chapter, we shall turn our attention to the forces governing foreign exchange rates and international exchange relationships when a uniform metallic standard, such as the international gold standard is not in operation.

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CHAPTER 30

NON-GOLD-STANDARD EXCHANGE RATES

Introduction.—In considering exchange rate determination when the international gold standard is not in effect, it is necessary to set forth precisely the situation that does exist in the international monetary field. There are several alternatives to the international gold standard. One is that all countries are on an irredeemable paper standard and that gold is treated strictly as a commodity, like copper, zinc, or tin. Another possibility is that gold is the standard of value in one or a few countries, while the great majority of countries operate on a paper standard. Again, a situation might exist where some countries on a paper standard might attempt to manage their currencies and regulate exchange rates by forces other than gold shipments, while other paper standard countries leave their exchange rates to the free determination of market forces.

It is clear from the foregoing suggestions that any of a wide number of arrangements may exist in the international monetary sphere. In considering non-gold-standard exchange rates, it will be advisable, in order to avoid confusion, to assume a situation in which gold is considered only as a commodity by all countries and exchange rates are left to the determination of free economic and market forces. Having done this, some account may then be taken of conscious efforts at exchange rate control when a full gold standard is not in operation.

THE PURCHASING POWER PARITY THEORY

Determination of rates under paper standards.—In the short run, the rate of exchange is determined by the relation between the demand for and the supply of funds abroad. If the demand for funds abroad on the part of Americans who have debts to pay in foreign countries is in excess of the

supply of such funds at the existing rate of exchange, the rate will have to rise to a point that will equalize these two forces. On the other hand, if the supply of funds abroad is in excess of the demand for them at a given rate, the rate will fall until the demand and supply are equalized. More fundamental, however, are the factors that go to determine the forces of supply and demand, and of these one of the most important is the relative purchasing power of the monetary units of any two countries. The reason that people want the money of a foreign country is because they have payments to make there, and if a unit of a certain foreign money will buy, on the average, some five times as many goods and services as a unit of domestic money, people will be willing to give, on the average, five units of domestic money for one unit of foreign. For purposes of illustration, let us assume that the United States and England trade only with each other and that neither country permits the export of gold. Assume further that there is absolute freedom of trade between the two countries with no hindrances in the way of tariffs, embargoes, and the like, with the exception of the embargo on gold. Now let us suppose that trade between the two nations is in a state of equilibrium and that the English pound will purchase 5 times as much, on the average, in England as the dollar will in the United States. The rate of exchange that would tend to exist in New York on London would be \$5.00; i.e., \$5.00 would tend to be the price charged by the New York bankers for the right to claim £1 in London. This may be termed the par of exchange between New York and London, or it may be designated the normal rate of exchange, since this rate tends always to prevail in view of the existing conditions. Any deviation of the actual rate from par, or from the normal rate, would set at work forces that would tend to bring the actual rate back to normal.

Automatic forces tend to prevent wide deviations of the rate from par.—Under the conditions assumed, it would be found that certain goods could be produced more cheaply in England than in the United States and Americans would buy those goods from England. Other goods could be produced more cheaply in the United States, and Englishmen would

purchase those goods in this country. Trade would take place between the two countries with a normal rate of exchange of \$5.00 to £1. The actual day-to-day rate, while seldom or never coinciding with the normal rate, cannot, it has been said, depart far from it. Suppose the actual rate to be \$5.20 per pound instead of \$5.00. Such a rate would tend to make the importation of goods from England less profitable than the normal rate, because £1000 worth of English goods would cost the American importer \$5200 when he came to buy a claim on an English bank to pay for them, instead of \$5000. Conversely, exports to England would be somewhat more profitable to English importers because they could buy claims to dollars to pay for the goods for less, in pounds, than if a rate of \$5.00 to the pound existed. Looked at from the point of view of the United States, imports would tend to decrease and exports to increase. The result would be a decrease in the demand for claims on England by American importers and an increase in the supply of such claims offered to the foreign exchange bankers by American exporters. In other words, the foreign exchange bankers' stock in trade, funds in England, would become larger, while the demand for this stock at the higher rate would decrease. Supply would exceed demand at \$5.20 and the competition of the foreign exchange bankers would drive the price of claims to funds in England to a lower level. A fall in the rate of exchange below \$5.00, on the other hand, would have just the opposite effect and the rate would tend to rise.

Effect of changes in relative purchasing power.—It should now be clear that the forces governing the short-run rate of exchange are those of the demand for and supply of funds abroad, and that, so long as the monetary units of the two countries undergo no marked change in purchasing power, the action of these forces will prevent the actual rate from diverging very far from the par or normal rate that represents relative purchasing power. It is quite possible, however, that some change may occur in the purchasing power of one or the other of these units of money that will destroy the relationship of 5 to 1 in their purchasing powers. Let us suppose, for example, that the United States greatly

increases the quantity of money issued and that prices rise so that they are double their former level, while the price level in England remains unchanged. In such circumstances, the old price relationships that had been worked out would be entirely upset. Practically nothing could be profitably purchased by Englishmen in the United States because of the tremendous increase in prices in the latter country, while the profit to be derived by importing goods into the United States from England would be tremendous. Trade between the two countries—if continued—would be all in one direction, from England to the United States. The funds that American foreign exchange bankers held in England would become a fixed supply good except for such amounts as they might be able to borrow for the time being from their English correspondents, while the demand for funds in England on the part of American importers would greatly increase. The bidding of the latter for the available supply of funds in England would drive the price of these funds sharply upward in terms of dollars and this rise in the rate of exchange on England would continue until the *exceptional* profit to be derived from importing operations has disappeared. At this time, another equilibrium would be established with the normal rate of exchange in close proximity to \$10.00 per pound. After this equilibrium had been reached, it would again be possible for the actual rate of exchange to fluctuate somewhat above and below the new par, with the forces of the demand for and the supply of funds in England operating to bring it back to this point every time it deviated very far therefrom.

In the illustration chosen it was assumed that no gold shipments took place and that a sudden doubling of the price level occurred in one of the countries. The first assumption is not in accord with normal trade and financial relationships between countries, but such conditions did exist for a number of years during and after World War I in several of the participating countries. As to the second assumption, that the price level suddenly doubled in one country, this could scarcely occur in actual practice, but the assumed conditions have been exaggerated for the purpose of throwing into sharp relief the main point, namely, that *the normal rate*

of exchange between any two countries tends to settle at a point that expresses the relative purchasing power of the money of those countries. This is the purchasing power parity theory of exchange rates, as first elaborated by the distinguished Swedish economist Cassel.¹ The theory is essentially sound as a theory of normal exchange rates, but, as set forth above, is subject to several limitations to which attention must now be directed.

Limitations on the theory of purchasing power parity.

—The purchasing power parity theory, if it is to be considered sound, must postulate an *equal rise in the prices of all goods* when the price level of any country engaged in foreign trade changes. If the prices of goods rise in varying degrees, the old equilibrium will be upset in the trade relations between the two countries, and a doubling of the price level of one of the countries may not result in an exactly proportional alteration in the normal rate of exchange between the two. As a theory of normal exchange rates, no criticism can be directed against it on this score. A rise in prices brought about by a purely monetary change cannot permanently affect the relative productivity of the two nations (unless one of them had too little money, from the standpoint of productive efficiency, to begin with), and it is on this productivity that their trade relations are based. But as a method of explaining the varying exchange rates that resulted from the fiat money orgy of World War I or other war periods, it is not highly satisfactory. The old price relationships were entirely destroyed in many cases by the increase in price levels, and the assumption that all prices rise in equal degree during such a period is so far from the facts that the working out of the theory with a high degree of precision is practically out of the question.

Another qualification that must be taken into account results from the various *tariff barriers and embargoes* that exist in practice and that interfere with the freedom of trade assumed by the theory. Any marked interference with imports because of a high protective tariff in one country can have the effect only of limiting the purchases of that country in other countries and thus of interfering with the

¹ In *Money and Foreign Exchange after 1914*.

natural equilibrium established by the relative price levels of the two countries. Embargoes also have the effect of limiting trade and causing the rate of exchange to deviate from the normal as represented by the relative purchasing powers of the money units of the two countries in question.

Purchasing power in a limited sense.—It should be noted, also, that purchasing power in a very general sense cannot be meant if the theory is to be considered sound, even when the other postulated conditions are fulfilled. There are many goods and services which do not enter into foreign trade at all, and about the prices of which the people of foreign countries have no concern. Bulky materials that are perishable or that have such low value that they cannot stand shipping charges, wages, salaries, professional fees, land, etc., are important items in determining the real purchasing power of a country's money, yet changes in the price of these goods and services would scarcely affect the valuation that another people would put upon the money of the country in which these prices had changed. In a sense, this comes under the head of the assumption that all prices must rise together in the same proportion. Cassel, however, evidently had no such comprehensive notion of purchasing power when he propounded his theory, and the fact that any great short-run change in the general price level does result in a marked change in the relationships that exist between the prices of goods, services, securities, etc., is a marked drawback to the satisfactory application of the theory when *general* price levels are used. There is a sort of natural limitation on the types of goods and services that can be traded in between countries, which has a similar effect, differing only in degree, to those restrictions imposed by the erection of tariff barriers and embargoes. It is granted that tariffs and embargoes interfere with the working out of the theory in practice. It must be likewise admitted that these natural limitations interfere with its practical application if the term purchasing power is used in any general sense. If purchasing power, on the other hand, is deemed to apply only to those goods and services that are, or may be, traded in between countries, the theory attains greater validity.

CONSCIOUS CONTROL OF NON-GOLD EXCHANGE RATES

Two types of control.—Under the working of the international gold standard, exchange rate fluctuations are kept within the narrow limits set by the cost of shipping gold, as already explained. This stability in foreign exchange rates is, in fact, a major advantage of the international gold standard. When a country departs from the gold standard, it may wish to avoid large fluctuations of exchange rates on foreign countries for the benefit of its international trade and so may adopt conscious controls for the purpose of attaining relative stability in exchange rates on other countries. The two methods that may be followed in order to attain this end are, first, exchange stabilization or equalization and, second, exchange control. Prior to World War II, the first of the above-mentioned methods was followed by England, the second by Germany. It will be of interest to consider the nature of each of these methods and the differences between them.

Exchange stabilization.—Under this method, the Treasury, or central bank, or stabilization fund exerts its influence on foreign exchange rates by entering the market as a buyer or seller of exchange, as the case may be. If, for example, the rate on a given foreign country is declining, the stabilization authority will come into the market as a buyer of that exchange, thus forcing the rate up to the desired position. At some other time, if the rate on this foreign country is too high, the authority will sell exchange in order to bring the rate down.

Two things should be noted in connection with this type of control. The first is that there is no interference with the normal working of the foreign exchange market. Dealers are free to buy such exchange as they wish in any amount, and the same freedom applies to their sales. The authority merely influences the rate through entering the market as a large-scale buyer or seller, but in no way interferes with the usual normal operations of foreign exchange dealers.

The second point to be noted is that no attempt is made to interfere with the long-term drift or trend of the exchange rate on any foreign country. If it were desired to maintain

long-term stability of exchange rates, there would be no objection to a return to the gold standard at an altered parity. England, for instance, left the gold standard in 1931 because the pound was overvalued and the existing parity could only have been maintained by a deflation of English prices and incomes. England might have maintained her price and income level *and* the gold standard as well by devaluing the pound, but she was uncertain as to what monetary developments might occur in other countries and so set up the Exchange Equalization Account to stabilize temporary fluctuations in foreign exchange rates. Then, if other currencies depreciated, the pound could be allowed to drift lower. Meanwhile, however, severe short-term fluctuations in exchange rates could be prevented by the buying and selling operations of the Equalization Account.

Exchange control.—The other way to stabilize exchange rates is to institute strict exchange control. This was the method of control adopted and maintained in Germany for some years prior to World War II. Under this type of exchange rate regulation, the exchange authority (ordinarily the central bank) becomes the sole buyer and seller of foreign exchange and so is in a position to force the demand and supply of exchange into equality with one another at whatever parity it is desired to maintain. An exporter, for example, who has acquired a claim to foreign currency must sell this foreign exchange to the central bank at the fixed rate. An importer, on the other hand, who wishes to obtain foreign currency to pay for a desired import must purchase it from the central bank at the fixed rate. Whether the prospective importer will be able to obtain the necessary foreign exchange or not will depend upon whether or not the central bank has the desired foreign funds and is willing to sell them at the fixed rate to finance the desired import.

It should be clear that the institution of rigid exchange control of the type just described destroys the foreign exchange market as a free market. Dealers are no longer able to buy and sell foreign funds in what amounts and for what purposes they wish. The central bank has become the sole buyer and seller of such funds and so supplants the foreign exchange market.

As long as the demand for foreign funds exceeds the supply at a given or determined parity, rigid exchange control of the sort described can maintain foreign exchange rates that are perfectly stable by forcing the demand into equality with the limited supply. If the supply of foreign funds exceeds the demand at the specified parity, stability of rates can still be maintained if the central bank is content to hold idle large foreign balances, disposing of only so much of them as are demanded at the determined or controlled rate.

Exchange stabilization vs. exchange control.—As to which of these two conscious methods of controlling foreign rates is most desirable, no categorical answer can be given. It undoubtedly depends on both the circumstances and the outlook of the country imposing the control. One competent authority suggests the following circumstances that should prevail if exchange stabilization is to be preferred:² “(1) the balance of payments is in only a mild and temporary state of disequilibrium, (2) gold and foreign-exchange reserves are equal to about one year’s average current-account debits, (3) the country has traditionally been prominent as an international financial center, (4) an essentially liberal and non-discriminatory commercial policy prevails, and (5) political freedom is a prized and jealously guarded privilege.”

From the above it would appear that conditions in England were well suited to an exchange stabilization policy in 1932. In Germany, on the other hand, practically none of the circumstances indicated in the foregoing quotation was met, wherefore the adoption of a system of exchange control—as opposed to exchange stabilization—was virtually a certainty.

Although a high degree of political freedom and an essentially liberal foreign trade policy in themselves assure a definite preference for exchange stabilization, the absence of the other circumstances referred to may force the adoption of exchange control methods. Thus, in time of war, when trade balances and normal commercial relationships are violently upset, resort to exchange control is necessary if

² Reprinted by permission of Prentice-Hall, Inc., from *International Economics* by Stephen Enke and Virgil Salera. Copyright, 1947, by Prentice-Hall, Inc., p. 581. The chapter in question was written by Professor Salera.

stability of exchange rates is to be maintained even by those countries that would, by nature, prefer the less rigid type of regulation offered by a program of exchange stabilization. This fact is exemplified by the wide resort to rigid controls following the outbreak of World War II by the political democracies as well as by the dictatorships.

Exchange control and economic regimentation.—Perhaps the gravest objection to exchange control from the point of view of the believer in free enterprise and free markets is that this type of regulation almost necessarily leads to a certain amount of economic regimentation. Countries usually adopt this type of control because of an insufficiency of foreign exchange, with the result that limited supplies of foreign funds must be distributed among importers in some conscious fashion. If the control authority metes out foreign exchange to importers without discrimination, so that each importer gets his share of what foreign funds are available, the situation, although not satisfactory, is tolerable. More usually, however, the authority decides more or less arbitrarily what importers shall receive how much exchange. Under such circumstances, the control authority acquires a large measure of control over industry, particularly where industry is fairly widely dependent upon imports for its profitable operation. In such cases, it is a short step from exchange control to a planned economy.

Prewar stabilization attempts.—The international exchange situation in the early thirties was anything but uniform. After departing from the gold standard, England resorted to exchange stabilization, while a considerable number of countries, known as the sterling group or sterling area, kept their exchange rates stable in terms of sterling. Germany, as noted, had adopted exchange control. France and a group of surrounding countries, known as the gold bloc, retained the gold standard, while the United States, after 1933, had what perhaps may best be termed a provisional gold bullion standard.

In an effort to bring some order out of this chaotic state of affairs, England, France, and the United States entered into an agreement known as the Tripartite Agreement in September 1936, and Switzerland, Holland, and Belgium

shortly joined in the group. Each party to the agreement had a stabilization fund, and each fund cabled the other daily the price at which it would agree to sell gold for export for the ensuing twenty-four hours. Thus each of the six stabilization funds could hold the currency of any of the others for this limited period without danger of loss through depreciation.

It is not intended here to delve into the technical operations under the Tripartite Agreement.³ Suffice it to say that it accomplished little, but was indicative of some effort at international monetary cooperation. Any chance it might have had to develop in more useful fashion was cut short by the outbreak of war in Europe in 1939. Before the termination of the war, a much more comprehensive plan of postwar cooperation in the form of an international monetary fund was adopted. The International Monetary Fund, and the International Bank for Reconstruction and Development, plans for which were drawn at the same time as those for the Fund, will be considered at some length in the following chapter.

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³ For a more complete discussion of the Tripartite Agreement, with pertinent criticisms, see Enke and Salera, *International Economics*, pp. 589-92.

CHAPTER 31

THE MONETARY FUND AND THE WORLD BANK

Introduction.—In view of the difficulties that developed in the international monetary field following World War I, it was heartening to find representatives of various allied nations making plans for postwar monetary cooperation well before the termination of World War II. The dates of the various preliminary proposals have been referred to at an earlier point (Chapter 6) and need not be repeated here. Neither is it necessary to go into the details of these preliminary plans and their points of difference or similarity. Suffice it to say that the various differences were ironed out at the United Nations Monetary and Financial Conference, held at Bretton Woods, New Hampshire, July 1 to 22, 1944, and participated in by the representatives of forty-four nations.

The outcome of the conference was the signing by the attendant delegates of a set of Articles of Agreement providing for the organization and operation of the International Monetary Fund and the International Bank for Reconstruction and Development. The discussion at the conference centered chiefly around the Fund, the provision for an International Bank—an American contribution to the agenda—being generally approved and accepted with relatively little debate.

The fact that the delegates of forty-four nations had signed the Articles of Agreement did not bind the nations that they represented to membership in the Fund and the Bank. These nations were given until December 31, 1945 (later extended one year) to become members. Representatives of thirty countries met in Washington, D. C., on December 27, 1945, to sign the Agreements and, by December 31, 1945, thirty-five countries had signed or indicated

their intention of becoming members. By the close of the year 1945, the Articles of Agreement had been legally put into force, although actual operations by the Fund and the Bank were not begun until 1947.

In the remainder of the chapter, consideration will be given to the purposes, powers, and functions of the Fund and the Bank as set forth in the Articles of Agreement, their operations to date, and their future prospects. The Fund will be considered first in these respects, followed by a similar consideration of the International Bank.

THE INTERNATIONAL MONETARY FUND

Purposes.—The purposes of the International Monetary Fund may be set forth in full. They are:

1. To promote international monetary coöperation through a permanent institution which provides the machinery for consultation and collaboration on international monetary problems.
2. To facilitate the expansion and balanced growth of international trade, and to contribute thereby to the promotion and maintenance of high levels of employment and real income and to the development of the productive resources of all members as primary objectives of economic policy.
3. To promote exchange stability, to maintain orderly exchange arrangements among members, and to avoid competitive exchange depreciation.
4. To assist in the establishment of a multilateral system of payments in respect of current transactions between members and in the elimination of foreign exchange restrictions which hamper the growth of world trade.
5. To give confidence to members by making the Fund's resources available to them under adequate safeguards, thus providing them with opportunity to correct maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity.
6. In accordance with the above, to shorten the duration and lessen the degree of disequilibrium in the international balances of payments of members.

The purposes of the fund, as thus set forth, are not only unobjectionable but praiseworthy.

Quotas.—Under the agreements each member country was assigned a quota. The quotas arrived at varied from \$500,000 for Panama and Liberia to \$2,750,000,000 for the United States. The United Kingdom with \$1,300,000,000 and the

U.S.S.R. with \$1,200,000,000 were the two other large subscribers. Total quotas amounted to \$8,800,000,000.

Subscriptions to the Fund by members are in gold or national currencies. The amount of the subscription payable in gold is fixed at 25 per cent of a country's quota or 10 per cent of its net official holdings of gold and dollars, whichever is smaller.

Values of currencies—exchange rates.—Once par values of the various members' currencies are fixed, each member agrees to permit exchange transactions between its currency and that of other members at the par rate plus or minus a small handling charge—one per cent on spot transactions. If necessary to maintain rates, gold may be freely bought and sold within the prescribed range.

However, if a country deems it necessary for the correction of a fundamental disequilibrium, it may alter the value of its currency by 10 per cent without the concurrence of the Fund. Alterations of currency value embracing a further 10 per cent may be made with the concurrence of the Fund, but the Fund must concur or object within 72 hours. Any additional alterations in value require the concurrence of the Fund, but a longer period is allowed for concurrence or objection. If the Fund objects, the change may not be made. If made in the face of such objection, the member may be denied further use of the Fund's resources and facilities.

A further provision permits the Fund to make uniform changes in the par value of all currencies, although a given member may retain its old par if it desires to do so.

Exchange restrictions.—Member countries are under obligation not to impose exchange restrictions on current transactions, although restrictions on capital transfers may be set up by any country. The Fund has the power to determine what are and what are not capital transfers. Members are also obligated not to enter into or maintain discriminatory currency arrangements and practices.

Exception to the above obligations on exchange restrictions is permitted during the transitional period. At the end of three years from the beginning of the Fund's operations exchange restrictions still in force on current transactions must be reported by the Fund and any country maintaining such

restrictions after five years must consult with the Fund, with a view to attempting their removal. Should the Fund order the removal of such restrictions and should the country fail to comply, said member may be required to withdraw from the Fund.

Exchange restrictions on current transactions may also be imposed with respect to scarce currencies, discussed below.

Transactions with the Fund.—Most important among the transactions permitted with the Fund is the right granted to member countries to buy other members' currencies, paying therefor in their own currencies. This amounts to borrowing from the Fund. Any member may buy other currencies in this manner up to 25 per cent of its quota in one year, with a top limit of 200 per cent of its quota. Progressive charges are levied on a member on currency in excess of its quota held by the Fund. Charges progress with the amount of the excess and with the length of time such excess is held by the Fund.

Certain requirements for the repurchase of members' currencies from the Fund are also included in the agreements, the purpose being to maintain a balanced condition of currencies held by the Fund.

Scarce currencies.—In the event that any member country exports more than it imports for a continuous period, the demand for that country's currency will result in a scarcity of such currency in the Fund. If such a situation develops, the Fund may declare that country's currency scarce and apportion the supply among the members demanding it.

If a member's currency becomes "scarce," that currency may be sold to the Fund for gold or be purchased by other members for gold, or the Fund may borrow the scarce currency from the member in question or from other members having a supply of it. However, no member whose currency has been declared "scarce" is compelled to lend to the Fund. Its original quota subscription is its total required contribution to the Fund.

Should the purchase of a scarce currency for gold come to an end and should the member with the currency scarcity refuse to lend to the Fund, member countries are allowed to *establish exchange restrictions in transactions involving the*

scarce currency. Since members are obligated to maintain exchange rates within the narrow limits previously referred to, action of this sort would be necessary in the circumstances.

Management.—The management of the Fund is vested in a Board of Governors, one governor and one alternate to be appointed by each member country. Voting power is substantially in proportion to members' quotas. Since Russia—who was assigned the third largest quota at Bretton Woods—has not accepted membership in the Fund, the votes of the United States and the United Kingdom combined constitute a slight majority of total votes. Provision is also made for a group of not less than twelve Executive Directors who need not be governors. The Executive Directors in turn appoint a Managing Director who is the chief administrative officer of the Fund and who must not be either a governor or an Executive Director. The Managing Director acts as chairman of the Executive Directors, but may not vote except in case of a tie. He also attends meetings of the Board of Governors, but has no vote.

The Board of Governors of the Fund may delegate a substantial portion of its powers to the Executive Directors. Among the eight powers that specifically may not be so delegated are such fundamental ones as the admission of new members, the revision of quotas, uniform changes in the par value of all member currencies, the requirement that a member withdraw, and the decision to liquidate the Fund.

Transactions of the Fund are to be with central banks, stabilization funds, or national treasuries. It is presumed that the general run of transactions will be carried out in the private foreign exchange markets, with resort to the Fund through official channels when necessary.

Critique of Bretton Woods Agreements.—After the publication of the agreements reached at Bretton Woods, they were subjected to a considerable amount of criticism from economists, bankers, and others. They also received their share of support as representing laudable international co-operation in the direction of monetary stability and also as being the best obtainable compromise and far superior to no concerted action at all. Before considering the operations of the Fund to date and the prospects of its success or failure,

it may be well to note some of the criticisms that appeared shortly after the termination of the Bretton Woods Conference.

Among the criticisms of the agreements, one noteworthy one concerned the fact that the provisions of the monetary fund are too general. Member nations are allowed too much leeway to do as they please without sufficient control by the Fund. For example, any member may devalue its currency by 10 per cent on its own initiative. Further devaluation, to the extent of another 10 per cent, must be reported to the Fund, which may object within 72 hours, but it seems unlikely that such objection would be made or, if made, would carry much weight. Assuming due care to have been used in fixing parities, any departure from the same should be considered as a serious matter requiring careful scrutiny and deliberation by the Fund plus adequate power to enforce the Fund's final decision.

Again, some objections have been raised regarding the matter of exchange restrictions. Although member countries are supposed to eliminate exchange restrictions as rapidly as possible, they may impose such restrictions for a period of five years in order to correct a fundamental disequilibrium. Whether such disequilibrium exists is determined by the country imposing the restrictions, the Fund having no authority on this matter for three years, and only in an advisory capacity for two years more. Moreover, dealings in scarce currencies, to be discussed presently, may be subject to restrictions by other countries at any time. Thus, there was a grave question whether the elimination of exchange restrictions would be much more effective than if no Fund existed.

The provisions for borrowing from the Fund have also been criticized. As noted above (p. 686), any member may purchase other countries' currencies, paying therefor in its own currency, up to 25 per cent of its quota in one year, with a top limit of 200 per cent of its quota. Thus a country with a purely fiat currency may obtain the soundest currencies by this method. It amounts to making loans of currencies without any regard to the soundness and ability to pay of the borrowing member.

The gravest objections to the agreements in the present form concerned the provisions on scarce currencies. If there is an exceptionally large demand for a given currency, say dollars, so that the Fund's supply of such currency becomes unduly attenuated, that currency may be declared scarce. If this happens, either exchange restrictions may be imposed on dealings in the scarce currency by other members, or the country whose currency has been declared scarce may relieve the scarcity by lending additional currency to the Fund.

In an orderly world, of the type existing in the decades prior to World War I, this might not be a matter of great moment. As a result of World War II, however, the United States emerged as the great creditor country, practically all of the other nations being in a debtor position. In addition there would be a large demand for dollars to pay for American exports that will be needed acutely by many foreign countries. It seemed inevitable, therefore, that dollars would become scarce, and the United States would then be confronted with three alternatives.

Two of these alternatives may be considered almost as one. The United States might cease exporting or might allow the dollar to be subjected to exchange restrictions by foreign member countries. These are two sides of the same problem. If trading in dollars is restricted because of their scarcity, importers in other countries will not be able to get dollars to pay for American goods and our exports will hence be sharply curtailed. As Lord Keynes put it, "The Americans, who are the most likely to be affected by this, have, of their own free will and honest purpose, offered us a far-reaching formula of protection against a recurrence of the main cause of deflation during the inter-war years, namely the draining of reserves out of the rest of the world to pay a country which was obstinately borrowing and exporting on a scale immensely greater than it was lending and importing. Under Clause VI of the plan a country engages itself, in effect, to prevent such a situation from arising again, by promising, should it fail, to release other countries from any obligation to take its exports, or, if taken, to pay for them."¹

¹ Speech of Lord Keynes on the International Monetary Fund Debate, House of Lords, May 23, 1944.

It seems unlikely that the United States would be agreeable to such a situation. Lord Keynes went on to add: "I cannot imagine that this sanction would ever be allowed to come into effect. If by no other means than by lending, the creditor country will always have to find a way to square the account on imperative grounds of its own self-interest,"² and he was undoubtedly correct. But this would mean a continuous increase in dollars loaned to the Fund with resultant dilution of our currency and probable inflation in this country.

It is easy to understand why Lord Keynes should favor such a set-up. In fact, he is very frank in stating that such action by the United States would make it possible for England to proceed subject to no deflationary forces. To allow this to occur at the expense of inflation in the United States, however, is not in line with the best interests of this country. It is on precisely this ground that one very able American economist came out in opposition to the Fund in the present form of the agreements.³

One further objection to the plan for an international monetary fund, in its present form, was that it is too vague and too complex. To cite one example, the question often arose as to whether the operation of the Fund does or does not resemble the gold standard in its operations. On this point, it might be well to quote two expert authorities:

"The fundamental forces at work would be the same under both systems. Under the gold standard, as under the Fund, each country ultimately must find means of paying for its foreign purchases by the sale of its goods and services. Under both arrangements temporary deficits can be met by gold shipments and by credit, and under neither of the arrangements can these methods offer permanent solutions."⁴

"Instead of maintaining the principle that the internal value of a national currency should conform to a prescribed de jure external value, it provides that its external value

² *Ibid.*

³ L. P. Ayers, *The International Monetary Fund*, Lecture before Graduate School of Banking, American Bankers Association, June 23, 1944.

⁴ E. A. Goldenweiser and A. Bourneuf, *Bretton Woods Agreements*, Federal Reserve Bulletin, September 1944, p. 851.

should be altered if necessary so as to conform to whatever de facto internal value results from domestic policies, which themselves shall be immune from criticism by the Fund. Indeed, it is made the duty of the Fund to approve changes which will have this effect. That is why I say that these proposals are the exact opposite of the gold standard."⁵

Dr. J. H. Williams, in commenting on the original Keynes and White plans, likened their probable operation to that of the gold standard but says the final plan will give little comfort to gold standard advocates.⁶ It would seem to be desirable to have a plan that is clear enough so that at least the experts will agree about such a significant point. The monetary fund agreement apparently fails to fill the bill in this respect.

On the other hand, such an astute student of international monetary affairs as Dr. M. A. Heilperin has made out a substantial case for the agreements on the ground that they represent the best compromise possible and should prove of definite assistance in helping to restore some degree of monetary stability in the postwar chaos that would otherwise certainly develop.⁷

The Fund in operation.—We may now turn our attention to a consideration of what the Fund has accomplished in the limited period during which it has been in operation. The first problem confronting the directors was obtaining from the members of the Fund a statement of the initial par values of members' currencies that would be satisfactory to the Fund. On December 18, 1946, in a press release, the Fund announced that it would begin exchange transactions on Mar 1, 1947, and that such transactions of the Fund would be at the initial par values that had been submitted to and accepted by the Fund, and a list of which was attached to the release. In connection with the problem of proper

⁵ J. M. Keynes, *op. cit.*

⁶ J. H. Williams, *Postwar Monetary Plans and Other Essays*, New York, 1944, pp. 6-7 and xi.

⁷ M. A. Heilperin, *International Monetary Reconstruction*, American Enterprise Association, 1945.

initial par values, which was admittedly a thorny one, the Fund made the following statement:

"This is the first time that a large number of nations have submitted their exchange rates to consideration by an international organization and thus a new phase of international monetary cooperation has begun. The major significance of the present step is not in the particular rates of exchange which are announced, but in the fact that the participating nations have now fully established a regime wherein they are pledged to promote exchange stability, to make no changes in the par values of their currencies except in accordance with the Fund Agreement, and to assist each other in attaining the general objectives of the Fund.

"The initial par values are, in all cases, those which have been proposed by members, and they are based on existing rates of exchange. The acceptance of these rates is not, however, to be interpreted as a guarantee by the Fund that all the rates will remain unchanged. As the Executive Directors of the Fund stated in their First Annual Report, issued in September: 'We recognize that in some cases the initial par values that are established may later be found incompatible with the maintenance of a balanced international payments position at a high level of domestic economic activity. . . . When this occurs, the Fund will be faced with new problems of adjustment and will have to recognize the unusual circumstances under which the initial par values were determined. It is just at such times that the Fund can be most useful in seeing that necessary exchange adjustments are made in an orderly manner and competitive exchange depreciation is avoided.'

"The Fund realizes that at the present exchange rates there are substantial disparities in price and wage levels among a number of countries. In present circumstances, however, such disparities do not have the same significance as in normal times. For practically all countries, exports are being limited mainly by difficulties of production or transport, and the wide gaps which exist in some countries between the cost of needed imports and the proceeds of exports would not be appreciably narrowed by changes in their currency parities. In addition, many countries have just begun to recover from the disruption of war, and efforts to restore the productivity of their economies may be expected gradually to bring their cost structures into line with those of other countries. Furthermore, for many countries now concerned with combating inflation there is a danger that a change in the exchange rate would aggravate the internal tendencies toward inflation.

"In view of all these considerations, the Fund has reached the conclusion that the proper course of action is to accept as initial par values the existing rates of exchange."

It would be possible, of course, to criticize the Fund for accepting the par values proposed by members and based on then existing exchange rates. However, the reasons given

by the Fund for such acceptance in the circumstances make the action seem justifiable.⁸

Between March 1, 1947, when the Fund was ready to begin exchange operations, and June 30, 1947, the Fund sold \$50 million of United States funds to France and \$6 million in United States funds and £1.5 million in sterling to the Netherlands.⁹ A few minor transactions in gold were also undertaken, and the Fund, in its annual report, called attention to the possibility of saving in gold shipping costs by means of transfers through the Fund from one to another of its gold depositories.

In addition to the comparatively few actual transactions in which the Fund has so far engaged, close contact has been maintained with the situation in member countries. The Executive Directors feel it to be their duty to be fully cognizant of the economic and financial condition of member countries. This is essential in connection with applications for the purchase of dollars or other currencies, and desirable so that the directors may be in a position to give helpful advice to members when the occasion warrants it.

Outlook for the Fund.—It is as yet too early to judge of the probable success or failure of the Fund. The Fund alone, or even in conjunction with the International Bank, cannot effect a cure of world ailments, as the directors well realize. Stabilization of the finances and economies of wartorn nations with a return to full productive capacity, coupled with measures to increase the flow of world trade, are essential to the successful functioning of the Fund. In the meantime, it can be helpful in giving advice and selling wanted currencies where justified, thus making the situation less chaotic than it otherwise would be.

One of the most hopeful aspects in the present outlook for the Fund is the evident soundness and ability of its

⁸ For a more thorough analysis of the problem, see L. A. Metzler, *Exchange Rates and the International Monetary Fund*, in *International Monetary Policies*, Postwar Economic Studies, No. 7, Board of Governors of the Federal Reserve System, Washington, 1947.

⁹ International Monetary Fund, Annual Report of the Executive Directors for the fiscal year ending June 30, 1947, p. 31. Later in the year, the Fund sold additional dollars, chiefly to England for sterling. See below, p. 696.

management. It was feared by some that the opening of the Fund for business would result in a wild scramble for dollars on the part of many member countries other than the United States. Such has not been the case, and M. Camille Gutt, the able Managing Director of the Fund, has made it clear that currencies will not be sold to members unless the Fund is convinced that such sales are to meet a temporary need and that the prospect of their repayment within a comparatively short time is good.

In the realm of exchange restrictions, little progress has as yet been made in the removal or relaxation of controls. The only members without exchange restrictions on June 30, 1947, were El Salvador, Guatemala, Mexico, Panama, and the United States. A big step forward was made in July when the United Kingdom abolished controls on current transactions, but subsequent difficulties in Britain necessitated the re-imposition of some restrictions later in the year. The very slow progress in the removal of controls has been the inevitable result of disturbed world conditions, and is in no sense the fault of the Fund. In fact, "the Fund is at present studying exchange restrictions and multiple currency practices now in force and will consult with members with a view to the mitigation and eventual elimination of any whose maintenance is no longer warranted by balance of payments considerations or which have a harmful effect on the balance of payments of other countries."¹⁰

The best judgment of the Fund that can be made at the close of its first year of operation is that it appears to be soundly and ably managed and that it will do everything in its power to assist currency stabilization under existing difficult conditions. The management of the Fund, as a result of its sane and realistic outlook, has done much to allay the fears that appeared upon the initial publication of the Articles of Agreement and that were noted earlier in the chapter.

Factual data concerning the Fund.—Certain information of interest relative to members, transactions, par values, and the condition of the Fund on November 28, 1947, is presented in the accompanying tables taken from the Fund's published reports.

¹⁰ *Ibid.* p. 35.

THE MONETARY FUND

695

INTERNATIONAL MONETARY FUND

BALANCE SHEET November 28, 1947

(Values expressed in U. S. Dollars on basis of established parities)

ASSETS

	<u>U. S. Dollars</u>	
GOLD WITH DEPOSITORIES*		
38,742,962.156 FINE OUNCES (U.S. \$35.00 per Fine Ounce)		\$1,356,003,675.46
BALANCES WITH DEPOSITORIES†		881,053,459.98
SECURITIES OF MEMBERS‡		
NON-NEGOTIABLE, NON-INTEREST BEARING, PAYABLE AT FACE VALUE ON DEMAND, IN MEMBERS' CURRENCIES		4,375,097,266.25
SUBSCRIPTIONS RECEIVABLE		
BALANCES DUE AND PAYABLE - MEMBERS WHOSE PAR VALUES HAVE BEEN ESTABLISHED	\$ 184,465,113.63‡	
BALANCES NOT DUE UNTIL MEMBERS' PAR VALUES HAVE BEEN ESTABLISHED	<u>1,124,887,500.00</u>	1,309,352,613.63
OTHER ASSETS		<u>231,421.52</u>
TOTAL ASSETS		<u><u>\$7,921,738,436.84</u></u>

LIABILITIES

CAPITAL		
MEMBERS' AUTHORIZED SUBSCRIPTIONS		\$7,921,500,000.00
LESS: EXCESS OF EXPENDITURES OVER IN- COME FROM INCEPTION TO NOVEMBER 28, 1947		<u>96,910.72</u>
NET CAPITAL		7,921,403,089.28
OTHER LIABILITIES		<u>335,347.56</u>
TOTAL LIABILITIES		<u><u>\$7,921,738,436.84</u></u>
/s/ C.M. Powell Comptroller		/s/ Gutt Managing Director

NOTES:

†For details see Holdings of Currencies.

- * The gold does not include 10,728.550 fine ounces held in suspense in respect of Paraguay's request to increase its quota. This gold has been accepted subject to certification by the International Bank for Reconstruction and Development that Paraguay's application for a proportionate increase of its subscription in the Bank has been received by the latter. This certification has not yet been received from the International Bank. Furthermore, an amount of 3,476,250.00 Guaranes is not included in the Fund's holdings of currencies for the same reason.

‡ Includes \$171,516,799.99 due from a new Member, Australia, payment for which was effected during December 1947.

INTERNATIONAL MONETARY FUND

SUMMARY OF TRANSACTIONS

EXCHANGE TRANSACTIONS	FOR THE QUARTER ENDED NOVEMBER 28, 1947		FOR THE NINE MONTHS ENDED NOVEMBER 28, 1947	
	AMOUNT IN CURRENCY	U.S. DOLLAR EQUIVALENT	AMOUNT IN CURRENCY	U.S. DOLLAR EQUIVALENT
<u>Currency Sold</u>				
U. S. Dollars	301,900,000.00	301,900,000.00	433,400,000.00	433,400,000.00
Pounds Sterling		<u>301,900,000.00</u>	1,500,000-0-0	6,045,000.00
				<u>439,445,000.00</u>
<u>Currency Bought</u>				
Chilean Pesos	232,500,000.00	7,500,000.00	232,500,000.00	7,500,000.00
Danish Kroner	16,316,599.99	3,400,000.00	16,316,599.99	3,400,000.00
French Francs	2,977,675,000.00	25,000,000.00	14,888,375,000.00	125,000,000.00
Mexican Pesos	43,695,000.00	9,000,000.00	109,237,500.00	22,500,000.00
Netherlands Guilders	31,834,200.00	12,000,000.00	95,622,001.94	36,045,000.00
Turkish Liras	14,000,000.00	5,000,000.00	14,000,000.00	5,000,000.00
Pounds Sterling	59,553,349-17-8	240,000,000.00	59,553,349-17-8	240,000,000.00
		<u>301,900,000.00</u>		<u>439,445,000.00</u>
<u>GOLD TRANSACTIONS</u>				
	FINE OUNCES	U.S. DOLLAR EQUIVALENT AT \$35 PER FINE OUNCE	FINE OUNCES	U.S. DOLLAR EQUIVALENT AT \$35 PER FINE OUNCE
<u>Currency Sold against Gold</u>				
U. S. Dollars	690.415	24,164.52	690.415	24,164.52
		<u>24,164.52</u>		<u>24,164.52</u>
<u>Currency Bought against Gold</u>				
Nil				

Currencies of Metropolitan Areas

Member	Currency	Par Values In Terms of Gold		Par Values In Terms of U.S. Dollars	
		Grams of fine gold per currency unit	Currency units per troy ounce of fine gold	Currency units per U. S. dollar	U. S. cents per currency unit
Australia	Pound	2.865 07	10.856 1	0.310 174	322.400
Belgium	Franc	0.020 276 5	1,533.96	43.827 5	2.281 67
Bolivia	Boliviano	0.021 158 8	1,470.00	42.000 0	2.380 95
Canada	Dollar	0.888 671	35.000 0	1.000 00	100.000
Chile	Peso	0.028 666 8	1,085.00	31.000 0	3.225 81
Colombia	Peso	0.507 816	61.249 5	1.749 99	57.143 3
Costa Rica	Colón	0.158 267	196.525	5.615 00	17.809 4
Cuba	Peso	0.888 671	35.000 0	1.000 00	100.000
Czechoslovakia	Koruna	0.017 773 4	1,750.00	50.000 0	2.000 00
Denmark	Krone	0.185 178	167.965	4.799 01	20.837 6
Ecuador	Sucre	0.065 827 5	472.500	13.500 0	7.407 41
Egypt	Pound	3.672 88	8.468 42	0.241 955	413.300
El Salvador	Colón	0.355 468	87.500 0	2.500 00	40.000 0
Ethiopia	Dollar	0.357 690	86.956 5	2.484 47	40.250 0
France	Franc	0.007 461 13	4,168.73	119.107	0.839 583
Guatemala	Quetzal	0.888 671	35.000 0	1.000 00	100.000
Honduras	Lempira	0.444 335	70.000 0	2.000 00	50.000 0
Iceland	Krona	0.136 954	227.110	6.488 85	15.411 1
India	Rupce	0.268 601	115.798	3.308 52	30.225 0
Iran	Rial	0.027 555 7	1,128.75	32.250 0	3.100 78
Iraq	Dinar	3.581 34	8.684 86	0.248 139	403.000

Currencies of Metropolitan Areas

(Continued)

<i>Member</i>	<i>Currency</i>	<i>Par Values In Terms of Gold</i>		<i>Par Values In Terms of U.S. Dollars</i>	
		<i>Grams of fine gold per currency unit</i>	<i>Currency units per troy ounce of fine gold</i>	<i>Currency units per U. S. dollar</i>	<i>U. S. cents per currency unit</i>
Lebanon	Pound	0.405 512	76.701 8	2.191 48	45.631 3
Luxembourg	Franc	0.020 276 5	1,533.96	43.827 5	2.281 67
Mexico	Peso	0.183 042	169.925	4.855 00	20.597 3
Netherlands	Guilder	0.334 987	92.849 8	2.652 85	37.695 3
Nicaragua	Córdoba	0.177 734	175.000	5.000 00	20.000 0
Norway	Krone	0.179 067	173.697	4.962 78	20.150 0
Panama	Balboa	0.888 671	35.000 0	1.000 00	100.000
Paraguay	Guaraní	0.287 595	108.150	3.090 00	32.362 5
Peru	Sol	0.136 719	227.500	6.500 00	15.384 6
Philippine Republic	Peso	0.444 335	70.000 0	2.000 00	50.000 0
Syria	Pound	0.405 512	76.701 8	2.191 48	45.631 3
Turkey	Lira	0.317 382	98.000 0	2.800 00	35.714 3
Union of South Africa	Pound	3.581 34	8.684 86 (or 173 shillings 8.367 pence)	0.248 139 (or 4 shillings 11.553 pence)	403.000
United Kingdom	Pound	3.581 34	8.684 86 (or 173 shillings 8.367 pence)	0.248 139 (or 4 shillings 11.553 pence)	403.000
United States	Dollar	0.888 671	35.000 0	1.000 00	100.000
Venezuela	Bolivar	0.265 275	117.250	3.350 00	29.850 7

**THE INTERNATIONAL BANK
FOR RECONSTRUCTION AND DEVELOPMENT**

Purposes.—The purposes of the International Bank for Reconstruction and Development, as established in the Articles of Agreement are:

1. To assist in the reconstruction and development of territories of members by facilitating the investment of capital for productive purposes, including the restoration of economies destroyed or disrupted by war, the reconversion of productive facilities to peacetime needs and the encouragement of the development of productive facilities and resources in less-developed countries.
2. To promote private foreign investment by means of guarantees or participations in loans and other investments made by private investors; and when private capital is not available on reasonable terms, to supplement private investment by providing, on suitable conditions, finance for productive purposes out of its own capital, funds raised by it and its other resources.
3. To promote the long-range balanced growth of international trade and the maintenance of equilibrium in balances of payments by encouraging international investment for the development of the productive resources of members, thereby assisting in raising productivity, the standard of living and conditions of labor in their territories.
4. To arrange the loans made or guaranteed by it in relation to international loans through other channels so that the more useful and urgent projects, large and small alike, will be dealt with first.
5. To conduct its operations with due regard to the effect of international investment on business conditions in the territories of members and, in the immediate postwar years, to assist in bringing about a smooth transition from a wartime to a peacetime economy.

The above purposes, like those of the Fund, are laudable and no objection is to be raised against them.

Capital of the Bank.—Under the Articles of Agreement the Bank has an authorized capital of \$10,000,000,000 composed of 100,000 shares of a par value of \$100,000 per share. The capital may be increased, if deemed necessary, by a three-fourths majority of the total voting power. Of the subscribed capital, 20 per cent is to be paid or subject to call as needed by the Bank for its operations, while the remaining 80 per cent is subject to call by the Bank only when required to meet obligations of the Bank created

through its guarantee of obligations other than its own or created by its own borrowing in the market of a member.

Payment for shares purchased by members is made in gold or United States dollars to the extent of 2 per cent of the amount of the payment, the other 18 per cent being made in the purchasing member's own currency.

Other sources of funds.—Besides the 20 per cent of the subscribed capital that may be used by the Bank in its lending operations, the Bank may issue its own obligations in the investment market of a member upon obtaining the member's consent to such an offering. The Bank may also guarantee loans originating from some outside source, provided the purpose of the loan is of the type the Bank is authorized to make and the rate of interest charged is deemed equitable. The Bank is authorized to charge certain commissions on loans that it has guaranteed and on its own loans, such commissions being carried to a special reserve account to be kept available for meeting the liabilities of the Bank.

Nature of business.—The nature of the business of the Bank has been indicated in the statement of purposes set forth at the beginning of this section of the chapter. The Articles of Agreement contain a wide variety of specific details of procedure that need not be considered here. The purpose of the Bank is to offer member countries an opportunity to borrow funds for reconstruction of devastated areas or for developmental purposes at reasonable rates of interest. The Bank is definitely directed in the Articles of Agreement to disregard political factors and to grant loans purely on the basis of the economic situation prevailing in the borrowing country. Total loans and guarantees must not exceed the subscribed capital, surplus, and reserves of the Bank, the uncalled portion of the subscribed capital (80 per cent) and the surplus and reserves constituting a fund for meeting possible losses resulting from defaulting debtors.

Management.—The provisions contained in the Agreements for the management of the Bank are practically identical with those applying to the Fund. Final power rests with a Board of Governors, one governor being appointed by each member country. Voting power is practically in pro-

portion to the number of shares held by member countries. Provision is also made for a group of not less than twelve Executive Directors and these Directors select a President who is neither an Executive Director nor a governor and whose duties and powers are analogous to those of the Managing Director of the Fund.

Critique of Agreements relating to the Bank.—Although, as indicated earlier, the publication of the Articles of Agreement gave rise to considerable immediate criticism of the provisions regarding the Fund, much less criticism was evinced concerning the provisions relating to the Bank. Some observers felt that the capital of the Bank was too large for an institution designed merely to supplement private lending, but, on the whole, the Bank was looked upon more favorably than was the Fund. One reason for this was that the Bank was directed to investigate carefully the economic position of applicants for loans and to grant loans only where the prospect for repayment was reasonably good. With regard to the Fund, on the other hand, it was thought that member countries would have the right to buy other currencies (chiefly dollars) at will up to the limit imposed by the Agreements. Actually, as the Fund has been managed, the directors have reserved the right to determine whether a request to buy dollars or other currencies is justified and to refuse such a request if it is not, but, at the time, the critics did not realize that this would be the case.

The Bank in operation.—The operations of the Bank, like those of the Fund, began in 1947. On May 9, 1947, a loan of \$250 million was granted to France through the Credit National, a semipublic French corporation. The original application had been for \$500 million, but "the Bank considered it necessary to limit its commitment to the needs of the immediate future, stating that it would be willing to consider an additional application from France later in the year and that the decision on any such application would be made in the light of conditions then prevailing, with particular reference to the progress made in carrying out the reconstruction program."¹¹

¹¹ Second Annual Report, International Bank for Reconstruction and Development, p. 18.

Later in the year, on August 7, 1947, a loan of \$195 million was granted to the Netherlands. The original application was for \$535 million to carry out a reconstruction project extending through 1949, but the Bank granted only as much as was needed for the 1947 portion of the program.

Apart from France and the Netherlands, the Bank had received, at the time its Second Annual Report was written, applications from the following countries for the purposes indicated:

<i>Millions of Dollars</i>		
CHILE	40	Hydro-electric, forestry, harbor, urban and suburban transport, and railway projects.
CZECHOSLOVAKIA	350	Reconstruction of war damage and losses. Restocking of raw materials. Rehabilitation projects.
DENMARK	50	Reconstruction and modernization of agriculture and industry.
IRAN	250	Modernization and development of industry, agriculture, and transport.
LUXEMBOURG	20	Reconstruction and modernization purposes.
MEXICO	209	Irrigation, hydro-electric, pipeline, highway, railroad, and harbor projects.
POLAND	600	Equipment and materials for reconstruction of coal mining, iron and steel, textiles, electricity, and transport.

Borrowing operations.—Early in the year 1947, it became apparent that the Bank would need additional dollar funds shortly and an informational campaign was accordingly inaugurated to acquaint the public with pertinent facts about the Bank. Furthermore, an intensive and successful effort was made in several states to obtain legislation or rulings that would permit banks and insurance companies to invest in obligations of the Bank.

Following these efforts, the Bank, on July 15, 1947, offered \$100,000,000 of ten-year $2\frac{1}{4}$ per cent bonds due July 15, 1957, and \$150,000,000 of twenty-five-year 3 per cent bonds due July 15, 1972, to American investors at par.

Concerning these issues, the absorption of which was highly gratifying, the Bank makes the following comment:¹²

"The offering was substantially over-subscribed and the bonds immediately sold at a premium over the public offering price, facts which are hopeful indications for the future. But it must be remembered that a major factor contributing to the success of the offering was the importance attached by American investors to the guarantee afforded by the 80% uncalled portion of the United States subscription to the capital of the Bank. As the operations of the Bank become much more substantial, the Bank's portfolio of loans will be of increasing significance in the investor's judgment as to the worth of the bonds. Fundamentally, it is the character of this portfolio which determines the Bank's ability to borrow, and therefore to lend, in the sizeable amounts contemplated by the draftsmen at Bretton Woods.

"At present, the United States is the only market available in which the Bank's securities can be sold in large amounts. Furthermore, as has been pointed out, the present demand for loans is almost exclusively a demand for dollars, to make purchases in the dollar area. But these should not be continuing conditions; as production and available supplies increase in other areas of the world, other currencies will be available for the purchase of the goods required for reconstruction and development and nations other than the United States will be in a position to permit the export of capital. It may be reasonably anticipated, therefore, that in the future, as conditions improve, non-American capital may be tapped by the Bank's borrowing operations."

Outlook for the Bank.—As in the case of the Fund, the outlook for the Bank is uncertain since it depends to a considerable extent on the course of international events, a course that cannot be predicted with certainty. The Bank is directed in the Agreements not to consider the political situation in any member country applying for a loan, yet, in many cases, the political and economic forces are so intermingled that it is difficult to disregard one and concentrate on the other. Where stable and reliable governments exist in member countries concentration on the economic and financial situation is feasible. If, therefore, satisfactory political settlements could be negotiated, the Bank could unquestionably serve a valuable and useful purpose. Even as things stand at present (end of 1947), the Bank can be, and has been, of service, although it has not been able to accomplish as much as it could have done under more favorable conditions.

¹² *Ibid.* p. 20.

The most favorable aspect of the immediate outlook is the able management of the Bank. The Bank, under the direction of the Executive Directors and its capable President, Mr. McCloy, is being operated in sound fashion and is doing all that is possible to serve its purposes (as indicated at the beginning of this section), within the limits of sound banking policy, in the present troubled international situation.

A statement of condition of the Bank on June 30, 1947, with explanatory notes, is appended for illustrative purposes.

International Bank for Reconstruction and Development

Balance Sheet—June 30, 1947

EXPRESSED IN UNITED STATES CURRENCY

(See Notes to Financial Statements)

ASSETS

<i>Due from Banks and Other Depositories</i>			
Member currency—United States	\$	61,829,306.54	
Member currencies—other than United States—Note A		<u>108,220,798.86</u>	\$ 170,050,105.40
<i>Investment Securities</i>			
United States Treasury Certificates of Indebtedness (\$155,700,000 face amount, at cost less amortization of premium)	\$	155,710,195.61	
Accrued interest		<u>556,622.11</u>	156,266,817.71
<i>Receivable from Members</i>			
Non-negotiable, non-interest-bearing, demand notes—Note B			
Payable in member currency—United States	\$	415,785,000.00	
Payable in member currencies—other than United States—Note A		<u>764,123,446.11</u>	\$1,179,908,446.11
Calls on subscriptions to capital stock			
Due prior to June 30, 1947—Note C	\$	525,400.00	
Due on or before June 25, 1951—Note D		<u>4,915,000.00</u>	<u>5,440,400.00</u>
			1,185,348,846.11
<i>Loans Outstanding</i>			
Loan commitment—Note E	\$	250,000,000.00	
Less—Unused portion of commitment		<u>158,000,000.00</u>	
Principal outstanding	\$	92,000,000.00	
Accrued interest and commissions		<u>318,020.51</u>	92,318,020.51
<i>Miscellaneous Receivables and Other Assets</i>			
			<u>147,364.51</u>
Total Assets			<u>\$1,604,131,154.25</u>

LIABILITIES, RESERVES AND CAPITAL

Liabilities

Accounts payable and accrued expenses	\$	261,507.57
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Special Reserve—Note F		33,452.05
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Capital

Capital Stock

Authorized 100,000 shares of \$100,000 par value each		
Subscribed 80,245 shares ..	\$8,024,500,000.00	
Less: Uncalled portion of subscriptions—Note G ..	6,419,600,000.00	\$1,604,900,000.00

Deduct—Excess of expenses over income:

At June 30, 1946	\$	125,158.36
Twelve months ended June 30, 1947		938,647.01
		<u>1,063,805.37</u>

Net Capital

1,603,836,194.63

Total Liabilities, Reserves and Capital

\$1,604,131,154.25*Notes to Financial Statements*

NOTE A

Amounts in currencies other than United States dollars have been translated into United States dollars at the rates recognized in making capital payments by member countries. In the cases of thirty-four members these rates are the established par values under the International Monetary Fund Agreement. In the cases of ten members (Brazil, China, Dominican Republic, Greece, Italy, Lebanon, Poland, Syria, Uruguay and Yugoslavia), the par values of their currencies have not yet been so established. No representation is made that any of such currencies is convertible into any other of such currencies at any rate or rates.

Article II, Section 9, of the Bank Articles of Agreement contains the following provisions with regard to maintenance of value of certain currency holdings of the Bank.

(a) Whenever (i) the par value of a member's currency is reduced, or (ii) the foreign exchange value of a member's currency has, in the opinion of the Bank, depreciated to a significant extent within that member's territories, the member shall pay to the Bank within a reasonable time an additional amount of its own currency sufficient to maintain the value, as of the time of initial subscription, of the amount of the currency of such member which is held by the Bank and derived from currency originally paid in to the Bank by the member under Article II, Section 7 (i), from currency referred to in Article IV, Section 2 (b), or from any additional currency furnished under the provisions of the present paragraph, and which has not been repurchased by the member for gold or for the currency of any member which is acceptable to the Bank.

(b) Whenever the par value of a member's currency is increased, the Bank shall return to such member within a reasonable time an amount of that member's currency equal to the increase in the value of the amount of such currency described in (a) above.

(c) The provisions of the preceding paragraphs may be waived by the Bank when a uniform proportionate change in the par values of the currencies of all its members is made by the International Monetary Fund.

NOTE B

Demand notes delivered to the Bank in substitution for currency of member, in accordance with Section 12 of Article V.

NOTE C

As of June 30, 1947, the Governments of Venezuela and Bolivia had not completed payment in their currencies of calls on stock subscriptions which were due on or before May 26, 1947. At June 30, 1947, the equivalent of \$525,000 was due from Venezuela and the equivalent of \$400 was due from Bolivia. Both of these members have subsequently paid the amounts due by delivering demand notes as provided in Section 12 of Article V.

NOTE D

Payments postponed until June 25, 1951, in accordance with the provisions of Article II, Section 8 (a) (i). These amounts are payable in gold or United States dollars.

NOTE E

On May 9, 1947, the Bank entered into a loan agreement with Credit National pour faciliter la reparation des dommages causes par la guerre providing for a loan to Credit National in the amount of \$250,000,000, or the equivalent thereof in other currencies, and a guarantee agreement relating thereto with the Republic of France. Such agreements became effective on June 9, 1947. Unless otherwise agreed, the loan commitment expires as to any unused portion at December 31, 1947.

NOTE F

The amount of commissions received by the Bank on loans made or guaranteed by it is required under Section 6, Article IV, to be set aside as a special reserve to be kept available for meeting obligations of the Bank created by borrowing or guaranteeing loans.

NOTE G

Subject to call by the Bank only when required to meet the obligations of the Bank created by borrowing or guaranteeing loans.

Conclusion.—The foregoing discussion of the Fund and the Bank brings to a close our consideration of international exchange and the value of money, although some further

reference to this subject will be made when discussing the problem of the standard in a later chapter. This latter problem, however, is closely bound up with the allied problem of monetary and credit policies as applied to the domestic economy.

In the chapters that follow, we shall consider the subject of credit policies of the Federal Reserve system and the possibilities of their improvement, after which the question of the standard will be attacked in the light of principles and practices previously set forth in the text.

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- Heilperin, M. A. *International Monetary Reconstruction*. New York. 1945.
- Williams, J. H. *Postwar Monetary Plans*. New York. 1947.
- Articles of Agreement*. United Nations Monetary and Financial Conference, Bretton Woods, N. H., July 1 to 22, 1944. U. S. Treasury. Washington.
- Annual Reports of International Monetary Fund*.
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PART VII
MONETARY AND CREDIT POLICIES

CHAPTER 32

CREDIT POLICIES OF THE FEDERAL RESERVE SYSTEM

Early experience.—Before the establishment of the Federal Reserve System, the banking system of the United States consisted of many thousands of individual banks, state and national, under no central control except the supervisory regulation that was exerted by the state superintendents of banks and the Comptroller of the Currency. In large measure, each banker was governed by his own judgment and the reserve requirements of the banking laws in determining the extent to which he should expand his loans and investments. Usually, in periods of active business, loans and discounts would be extended until the bankers became somewhat worried about their reserve position, when they would curtail their lending operations and thereby assist in bringing about the termination of the upswing of business. Under such circumstances there would be little or no organized control of credit.

When the Federal Reserve System was inaugurated, it was expected that its chief functions would be to extend emergency credit to member banks in time of stress and to furnish the country with an elastic system of note issue based on self-liquidating paper. Otherwise, no organized control of credit was contemplated. As a matter of fact, little attention was given to credit policy until after 1921, and our interest will lie chiefly in the period following that year. First, however, a brief consideration of Federal Reserve policy during the earlier period is in order.

Prewar period.—During the period prior to the entry of the United States into World War I, the Reserve System functioned substantially in the manner anticipated by the framers of the act. Its volume of operations was small and open market operations in government securities were of

negligible importance. In fact, in December 1916, the chief earning asset of the Reserve banks consisted of \$128,956,000 of bills bought in the open market, bills discounted amounting to but \$28,552,000 and holdings of long-term government securities to \$44,247,000. Federal Reserve notes in circulation amounted to \$274,796,000 on the same date.

It is probably correct to say that the development of the Federal Reserve System during this early period was as rapid and satisfactory as could have been expected. Much of the time of the authorities in charge of the administration of the system had to be devoted to problems of organization, and no real evolution of broad policies could have been anticipated. Moreover, almost no state banks had joined the system, and many of the national bank members were skeptical of the advantages to be derived from their membership.

The war period.—The entry of the United States into the war in April 1917 changed the whole aspect of reserve banking development. From that time on it was necessary for the system to devote its attention to the vital task of organizing the credit facilities of the country for war financing. The amendments of June 21, 1917, by providing for the issuance of Federal Reserve notes directly against gold security, for a reduction in member bank reserve requirements and concentration of reserves in the Federal Reserve banks, and for more attractive conditions of state bank membership in the system, greatly aided the Reserve banks in attaining the desired end.

Under the provisions of the law, as thus amended, the Federal Reserve banks exchanged Federal Reserve notes for gold; this process, together with the application of the new reserve requirements, brought several hundred million dollars of gold into the vaults of the Reserve banks and thereby increased the lending power of the system. The system was also strengthened by an increase in state bank members from 53, at the time of the passage of the amendments, to 250 at the end of 1917.

The extent of the Reserve banks' operations during the war period is best shown by the data in Table 49, taken from the combined condition reports of the twelve Federal

Reserve banks. As the war progressed, more and more of the Reserve banks' credit was based on United States securities, with the result that, by the end of 1918, these banks held discounts secured by United States war obligations amounting to \$1,400,371,000 and purchased government securities of \$311,546,000. The gold reserve was more than doubled during the period in question and the amount of Federal Reserve notes in circulation increased by over seven times.

TABLE 49
SELECTED ITEMS FROM THE COMBINED STATEMENTS OF THE FEDERAL
RESERVE BANKS
(In thousands of dollars)

	Mar. 30, 1917	June 22, 1917	Dec. 28, 1917	May 10, 1918	Nov. 8, 1918	Dec. 27, 1918
Total gold reserve..	938,046	1,212,018	1,671,133	1,883,135	2,046,591	2,090,274
Held by Federal reserve agents..	360,668	390,765	781,851	885,027	1,145,640	1,288,309
Bills discounted:						
Secured by war obligations.....	.....	83,185	283,421	612,324	1,316,967	1,400,371
All other.....	20,106	157,799	397,285	326,717	480,271	302,567
Bills bought.....	84,473	194,303	275,366	286,036	374,522	303,673
United States securi- ties.....	47,700	114,918	107,233	146,878	121,435	311,546
Net deposits.....	706,905	1,242,210	1,457,994	1,651,324	1,661,521	1,552,892
Federal reserve notes in actual circula- tion.....	357,610	499,721	1,246,488	1,560,618	2,558,196	2,685,244

Source: *Annual Report of the Federal Reserve Board*, 1918. Pp. 15-16.

The discount policy of the Federal Reserve System during the war was dictated by the policy of financing adopted by the Treasury. In the course of the war, the Treasury floated large issues of Liberty Bonds—which, including the Victory Loan in the spring of 1919, aggregated more than \$21,000,000,000—at interest rates that were distinctly below the market. The sale of this vast mass of securities at par would have been quite impossible without the assistance of the banking system.

The banks came to the aid of the government in two ways. First, they themselves purchased large amounts of bonds as investments; and, second, they made loans on the security of Liberty Bonds to those wishing to buy them on time at a rate equal to the coupon rate on the bonds. Neither

of these transactions required any immediate outlay of reserve funds by the banks. When the banks purchased Liberty Bonds for their own account, they merely credited the deposit account of the Treasury with the amount of the purchase. When they made loans to customers on Liberty Bond security for the purchase of bonds, they likewise credited the account of the Treasury by the purchase price of the bonds. Since United States deposits required no reserve held against them, these were both mere bookkeeping transactions that increased the banks' loans or investments, but did not require a reduction in their other loans or deposits.

The Treasury, however, made use of these deposit credits by drawing checks against them for the purpose of paying bills incurred in the purchase of munitions, food, and other military supplies. As these checks were deposited by the creditors of the government in their banks, they were paid by debiting the Treasury's account and crediting the account of the depositors. From this point on, they became individual deposits that were subject to reserve requirements. Consequently, it soon became necessary for the banks to borrow at the Reserve banks in order to keep their reserves up to the required figure. Moreover, commodity prices and wages had risen sharply and the increased need for hand-to-hand money that accompanied this rise in the price level also made it necessary for member banks to borrow at the Reserve banks.

In order to permit the individual banks of the system to borrow at the Federal Reserve banks without loss, the latter institutions maintained discount rates at an artificially low level and instituted a preferential rate on war paper (i.e., discounted paper secured by Liberty Bonds) that was as low as—at times slightly lower than—the rate borne by the bonds. The Reserve banks also accepted for discount nonmember bank war paper when endorsed by a member bank.

It was thus possible for the expansion of credit to go on in the fashion described as long as the Reserve banks had sufficient gold to maintain their required reserves against notes and deposits. Actually, the gold reserves of the Re-

serve banks increased sharply during the period, as shown in the table. This increase in reserves was made possible by the exchange of Federal Reserve notes for gold, a procedure that was greatly facilitated by the large gold imports, amounting to about \$1,000,000,000, that occurred in 1915-1916, and by the embargo on gold exports that was in force from the fall of 1917 until the summer of 1919. Without this increase in gold reserves it would have been impossible for the expansion of credit to have gone nearly so far as it actually did.

The postwar inflation.—Although the armistice was signed in November 1918, much financing was still necessary. The Victory Loan was floated in May 1919, at a rate of $4\frac{3}{4}$ per cent, and it was essential to the success of this issue that the Reserve banks should retain their artificially low discount rates until the financing of the issue was completed. Meanwhile, after a brief readjustment necessitated by the cessation of demand for war materials and the return of service men to civil life, business entered a period of boom conditions. The relaxation of restrictions that had been imposed on individual consumption during the war was the signal for the beginning of an orgy of expenditure that did not end until the collapse of the boom in the spring of 1920.

That the business boom was stimulated by the retention of low discount rates at the Reserve banks can scarcely be doubted. In view of the Treasury's policy, however, it was not deemed expedient to raise rates until November 1919, and no substantial increases were made until the beginning of 1920. Soon after the increases of 1920 had been put into effect, the crisis occurred in business, and in some quarters there was a disposition to lay the blame for it at the doors of the Federal Reserve System. The absurdity of such an attitude was apparent, however, to serious students of economics, who were inclined rather to blame the Reserve banks for having waited so long before raising their rates. The crisis was inevitable, but quicker action by the Reserve banks, had the Treasury's policy permitted it, would very likely have mitigated the severity of the crash by preventing the preceding overexpansion from having gone so far.

The Federal Reserve System met the crisis of 1920 in approved fashion. Discounts and note-issues were expanded to meet the needs of member banks who wished to carry their fundamentally sound customers over the period of readjustment. Consequently, "total bills bought and discounted" and "Federal Reserve notes in actual circulation" did not reach their respective peaks until November and December, 1920. The extent of the postwar expansion and subsequent decline is shown in Table 50.

TABLE 50
SELECTED ITEMS FROM THE COMBINED STATEMENTS OF THE FEDERAL
RESERVE BANKS
(In thousands of dollars)

	June 27, 1919	Dec. 26, 1919	June 25, 1920	Dec. 30, 1920	Dec. 28, 1921	June 30, 1922
Bills discounted:						
Secured by war obligations.....	1,573,483	1,510,364	1,277,980	1,141,036	487,193	167,241
All other.....	244,557	684,514	1,153,814	1,578,098	692,640	294,177
Bills bought.....	304,558	585,212	399,185	255,702	114,240	161,112
United States securities.....	231,569	300,405	352,296	288,191	241,444	555,465
Federal reserve notes in circulation....	2,499,180	3,057,646	3,116,718	3,344,686	2,443,497	2,152,962
Reserve ratio (per cent).....	52.1	44.8	43.6	45.4	71.1	77.9

Source: *Annual Reports of the Federal Reserve Board.*

In 1921 a Congressional committee known as the Joint Commission of Agricultural Inquiry conducted a searching investigation of the Federal Reserve System, which was thought by some to have been responsible for the depression in agriculture and to have discriminated against agriculture as well. The Commission returned a clean bill of health for the system and demonstrated in its report that, if there had been discrimination, it had been in favor of agriculture rather than against it.

CREDIT POLICY AFTER 1921

Banking policy and credit policy.—In the operation of the Federal Reserve System two types of policy have been developed that may be termed "banking policy" and "credit policy," respectively. Banking policy may be held to include

those relations that have developed between the Reserve banks and borrowing member banks together with the rules and regulations that have been evolved with respect to the eligibility of paper, the clearing and collection of checks, and other arrangements having to do with individual or technical banking operations. Credit policy, on the other hand, is concerned with operations of the Reserve banks that affect the general credit situation, such as open market operations, changes in discount rates, etc. The developments coming under the head of banking policy have already been considered in detail, as well as the technique of open market operations and discount rate changes. The emphasis in the present chapter is not on these phases of banking or credit policy, but on the effects of the latter and the aims and purposes of the credit policy that has been followed in the period since 1921.

Credit policy.—In the nature of the case, many of the activities of the Reserve System that have been grouped under the head of banking policy were engaged in from the beginning. With respect to a general credit policy, however, the situation has been different. It has already been shown that, during the war and postwar periods, Federal Reserve policy was determined by the needs of the Treasury and consisted in providing for the maximum expansion of credit at low rates. It was really not until the resumption of business activity in 1922, therefore, that any real effort was devoted to the formulation of a sound credit policy.

The most important step toward the development of a credit policy was the organization of an open market investment committee, in 1922, to unify the purchases and sales of the twelve Reserve banks in the open market. The discovery had been made that purchases in the open market brought about a reduction of member bank indebtedness at the Reserve banks and vice versa, and that interest and discount rates in the short-term markets tended to vary directly with the amount of member bank indebtedness. Open market operations accordingly assumed a position of importance, along with changes in discount rates, as a method of controlling the general credit situation.

Gold position of the United States.—In the years prior to World War I, the credit policy of central banks, as typified by the Bank of England, was generally conditioned on the state of the central bank's gold reserve. When that reserve was large, steps were taken to ease the credit situation, and, when it declined to unduly small proportions, a reversal of policy was put into effect. This simple criterion of credit policy was, however, not satisfactory to the Reserve authorities, when they turned their attention to the problem in 1922, for the reason that the gold reserves of the system were excessive. Although the reserves of the Federal Reserve banks combined had closely approximated the legal minimum at the height of the expansion in 1920, the subsequent deflation had greatly reduced the Reserve banks' note liabilities. Moreover, while deposit liabilities had increased slightly, the increase was largely the result of gold deposits by member banks that had received large gold imports from abroad.

During the years 1915–1918, the United States had received net imports of gold of \$1,152,269,000. The year 1919, which saw the removal of the gold embargo imposed during the war, was marked by a net gold export of \$291,651,000. In the period 1920–1922, however, the gold inflow was again resumed, net imports for these years amounting to \$1,000,629,000. Meanwhile, the gold reserves of the Federal Reserve banks had increased, by January 1923, to \$3,075,810,000, and the reserve ratio stood at 76.9 per cent for the combined Reserve banks. Obviously, unless the Reserve authorities wanted to encourage an inflation of larger proportions than that following the war, the use of the reserve ratio as an immediate indicator of credit policy was definitely out of the question.

Announced policy of 1923.—The conclusions of the Board of Governors with respect to the determination of a criterion of credit policy was published in the annual report of that body for the year 1923 under the caption of "Guides to Credit Policy."¹ The major conclusions of the Board in this connection may be summarized briefly as follows:

1. The inadequacy of the reserve ratio as a guide to credit

¹ Pp. 29–39.

policy was clear in view of the huge excess reserves of the Federal Reserve banks and the fact that gold movements were due to abnormal factors.

2. The maintenance of a stable price level as the sole objective of credit policy was rejected. The Board recognized the interrelation of credit and prices, but maintained that they were not related to each other as cause and effect. Moreover, it was pointed out that the price index records an accomplished fact. The use of a price index as a sole guide to credit policy would, therefore, be unsatisfactory as the unsound credit expansion that might bring about a rise in prices would already have taken place before being indicated in the price index. Finally, it was noted that certain changes in prices come from other than credit sources and should not be controlled by credit policy.

3. The personal—and therefore not statistically measurable—side of credit was stressed. The Board pointed out the importance of this phase of credit extension in connection with any program of credit control.

4. Both qualitative and quantitative tests were asserted to be of importance—the kind of credit extended and the total amount. As to the kind of credit, the Federal Reserve Act itself suggested the guides or indicators in testing the need for and adequacy of Federal Reserve credit. The needs for credit that the Act recognized as appropriate were those arising out of agriculture, industry, and trade. As to the total quantity of credit, the Board believed that there would be little danger of excessive credit expansion by the Federal Reserve banks if the credit created was restricted to productive uses.

5. In amplifying its interpretation of productive uses of credit, the Board pointed out that as long as there was an uninterrupted flow of goods from the producer through the channels of distribution to the consumer, i.e., as long as production and consumption were in equilibrium, credit is being productively used. Extension of credit for withholding goods from the market for building up excessive inventories is not a productive use of credit. Neither is credit extended for speculative purposes productively used. As long as credit is extended for short-term operations in agriculture, industry,

and trade, when these operations are genuinely productive and non-speculative, the volume of credit will not be excessive.

6. The need for adequate statistical data to assist in carrying out a credit policy of the sort outlined was obvious. The Board recognized this fact and stated that its own statistical division and those of the Federal Reserve banks were constantly employed in collecting business data and putting it into the form of index numbers for the Board's use.

It would be difficult to find anywhere a more penetrating analysis than that contained in the paragraphs here summarized from the Board's 1923 report. Unfortunately, these excellent guiding principles were not followed for long.

Alteration of policy.—The Board has not referred specifically in any of its reports to a departure from the principles announced at the close of 1923. Nevertheless, it is rather generally agreed that the Board's policy in 1924, and more decidedly in 1927, was influenced by international considerations. In both of those years a policy of "easy money" was pursued. In 1924 the Reserve banks' holding of United States securities were increased from \$118,000,000 (average of daily figures) in January to \$554,000,000 in December, while discount rates were reduced from $4\frac{1}{2}$ per cent to 3 per cent at the New York bank and to $3\frac{1}{2}$ or 4 per cent at the other Reserve banks in the course of the year. The total of Reserve bank credit outstanding was increased from \$1,040,000,000 in January to \$1,288,000,000 in December, although it was below either of these figures during the spring and summer months. As business activity had fallen off somewhat since 1923, the increase in Reserve bank credit resulted in a distinctly easy money situation. It is probable that this policy was designed, in part at least, to assist European countries, especially England, to return to the gold standard by discouraging further imports of gold into the United States.

The years 1925 and 1926 presented no unusual problems of credit policy. Business shortly recovered from the 1924 slump and the Reserve banks pursued a fairly uniform policy throughout the two years. Discount rates were maintained at $3\frac{1}{2}$ or 4 per cent at the various Reserve banks throughout

and holdings of government securities, which had been decreased early in 1925, were maintained at approximately a \$350,000,000 level during both 1925 and 1926. This state of affairs continued into the early months of 1927, but later in that year a second period of artificially easy money was inaugurated by the Federal Reserve System.

The 1927 policy was even less justified from the point of view of domestic conditions than that of 1924, and it was admitted to have had as its purpose the encouragement of gold exports to assist foreign countries that were losing gold to us. In the course of the last seven months of the year, Reserve bank holdings of United States securities were increased from \$291,000,000 to \$606,000,000, and discount rates were lowered in August from 4 to 3½ per cent at all the Reserve banks. Total Reserve bank credit outstanding increased from \$1,041,000,000 in May to \$1,568,000,000 in December. As business had experienced a slight recession in activity, thereby needing less Reserve bank credit, a period of extremely easy money naturally resulted from the policy pursued.

While the 1924 policy had been followed by a net export of gold amounting to \$134,367,000 in 1925, the year 1926 again witnessed an excess of gold imports of \$97,796,000. Moreover, additional net imports of \$131,501,000 occurred in the first six months of 1927. The easy money policy was therefore chiefly designed to reverse this trend. Its success in this particular direction is attested by the fact that there was a net export of gold from the United States, from September 1927 to July 1928, amounting to \$577,109,000.

Efforts to restrict speculative use of credit.—The apparently successful results of the 1927 policy were short-lived. The easy money conditions of that year encouraged and intensified the speculative movement in the stock market, a movement that had already made fair headway. As a result, the two years ending in October 1929 were witness to an orgy of stock speculation of the first magnitude. From November 1927 to the close of 1928 the average renewal rate on call loans to brokers had risen from 3.6 to 8.6 per cent, and other open market rates had stiffened materially. Meanwhile the discount rates of the Reserve banks

were raised from $3\frac{1}{2}$ per cent at all banks to 5 per cent at eight of the Reserve banks (including New York) and $4\frac{1}{2}$ per cent at the other four. The Reserve banks also reduced their holdings of United States securities to \$263,000,000 in December 1928.

The speculative fever had progressed too far, however, and the discount rate increases and sales of securities were of no avail in abating the expansion of credit. Accordingly, early in 1929, a different set of tactics was adopted. On February 7th, the Board issued a notice to the public, including part of an earlier letter to the Federal Reserve banks, in which it was pointed out that, while the Board had neither the right nor the desire to set itself up as an arbiter of security values, it was much concerned by the absorption of credit by the stock market to the detriment of both commerce and business and of the proper functioning of the Federal Reserve System, the credit facilities of which, in the Board's opinion, were being used indirectly in the furtherance of stock speculation in contravention of the intent of the law.

A policy of direct pressure on member banks was thereupon inaugurated that effected some restriction in the call loans of those banks, but did not have any appreciable results in the way of curtailing the expansion of total call loans for the reason that the high rates in the market invited the extension of loans for the account of others than member banks. The extent of the increase in loans of this category is shown in Table 14 in Chapter 14.

On August 9, 1929, the Federal Reserve Bank of New York finally was permitted by the Board to raise its discount rate from 5 to 6 per cent, and at the same time the Reserve bank buying rate on acceptances was reduced from $5\frac{1}{4}$ to $5\frac{1}{8}$ per cent. This was done in an effort to permit the financing of commercial transactions on a reasonable basis while making credit for speculative purposes more costly. The futility of this endeavor was a foregone conclusion. The system's holdings of acceptances jumped from an average of \$75,000,000 in August to \$337,000,000 in October, the month of the stock market crash. This had the same effect in easing the money market as an equivalent purchase

of United States securities would have done, and thereby more than offset the restrictive effect of the 6 per cent discount rate.

Looking back upon the 1927 policy of easy money, it seems fairly clear that it was responsible, in part at least, for the difficulties of the two succeeding years. The stock market boom was responsible for far greater difficulties on the part of foreign central banks than those that were alleviated by the 1927 policy. On the whole, it would seem that a stricter attention to domestic credit needs in 1927 on the part of the Federal Reserve authorities would, in the end, have exerted a sounder influence on international banking affairs than the policy that was, in fact, followed.

The stock market panic and business depression.—The exemplary action of the Federal Reserve banks, particularly the New York bank, which was most concerned, at the time of the break in the stock market has been noted in an earlier connection (p. 333). The New York bank, by discounting paper freely for members and purchasing a large amount of United States securities, averted a money panic and permitted the calling of loans to brokers in large quantities.

Business activity, which had begun to decline in the summer of 1929, continued its downward course—with a brief interruption in the spring—throughout 1930 and into 1931. Accordingly, as soon as conditions in the stock market would permit, a policy of easy money was inaugurated. By the end of 1929, the discount rate at the Federal Reserve Bank of New York had been lowered, in two steps, from 6 to $4\frac{1}{2}$ per cent. Five reductions in the course of 1930 brought it to 2 per cent at the close of that year, and a further reduction to $1\frac{1}{2}$ per cent occurred on May 8, 1931. On the latter date, the discount rates at the other Reserve banks ranged from 2 to 3 per cent as compared with a range of $4\frac{1}{2}$ to 5 per cent before the stock market break. In October 1929, average holdings of United States securities were \$154,000,000, for the twelve Reserve banks. These holdings were steadily increased to approximately \$600,000,000 in August 1930, and were further augmented during the year following.²

² To over \$700,000,000.

In the circumstances, money rates in the open markets receded to record low levels and customers' rates at the banks themselves also declined. The open market rates in New York city near the end of July 1931, are shown in Table 51 and indicate the extent of the decline. Money rates remained low until September 1931, when England departed from the gold standard. This led to a run on the dollar, previously referred to, in which the United States lost about \$700,000,000 in gold in a period of six weeks. In order to meet the demands for gold and a simultaneous withdrawal of deposits by customers, it was necessary for member banks of the Federal Reserve system to increase their average discounts at the Reserve banks by about \$500,000,000 between August and December, while bills bought by the Reserve banks in the open market rose from an average daily holding of \$135,000,000 in August to \$692,000,000 in October.

TABLE 51
OPEN MARKET RATES, NEW YORK CITY

<i>Week ended —</i>	<i>Call loans (renewal)</i>	<i>Time loans (60-90 days)</i>	<i>Commercial Paper (4-6 mo.)</i>	<i>Acceptances (90-day)</i>
July 25, 1931.....	1.50	1.38	2.00	0.88
August 1, 1931.....	1.50	1.38	2.00	0.88
August 8, 1931.....	1.50	1.38	1.75	0.88

Source: *The Annalist*. Weekly average of daily figures.

Under the circumstances, money rates were bound to tighten. For the week ended October 24th, the average rate on call loans had risen to 2.50 per cent, on time loans to 3.71 per cent, on commercial paper to 4.25 per cent, and on acceptances to 3.25 per cent. The Federal Reserve Bank of New York raised its discount rate to 2½ per cent on October 9th, and to 3½ per cent on October 16th, the rate remaining at the latter figure throughout the rest of the year. Thus the easy money policy of the Board, which had been ineffective in reviving business up to September, was suddenly terminated in the latter month as a result of international financial difficulties.

Criticism of policy.—Perhaps the chief criticism of Federal Reserve credit policy in the period 1922–1931 is that it was too opportunistic. Some degree of opportunism must enter into central banking policy in the very nature of the case, but there should be underlying principles that determine the main features of credit policy. Such underlying principles were formulated by the Board in 1923, but have not been followed since with any degree of consistency. The easy money policy of 1927, opposed to the requirements of domestic business, brought havoc in its wake and made it necessary to pursue a policy in 1929 that was in opposition to the interests of foreign countries. After 1929, the policy of easy money was carried to an extreme without satisfactory results. The Board would have done well to revert to the sound maxims of its announced policy of 1923 as an underlying basis for its future credit policy.

The Glass-Steagall Act and the easy money policy of 1932.—Banking conditions had become so distressing by the beginning of 1932 that emergency relief legislation was essential. The creation of the Reconstruction Finance Corporation by the act of January 22, 1932, has been discussed in another connection. This legislation was followed by the passage of the Glass-Steagall Act on February 27, 1932, which has also been previously considered. It will be recalled that, in order to permit the issuance of Federal Reserve notes, while still not making it necessary for member banks to increase their discounts at the Reserve banks, Section 3 of the Glass-Steagall Act authorized the Federal Reserve Board to permit Federal Reserve agents to accept obligations of the United States, as well as eligible paper, as security for Federal Reserve notes, if it were deemed in the public interest to do this.

It is sometimes stated that the Glass-Steagall Act was passed because the member banks had insufficient eligible paper to obtain the Federal Reserve notes necessary to meet the demands of customers who were withdrawing their deposits. This was not strictly true, since member banks could borrow on their own notes secured by United States obligations, and the majority of member banks had govern-

ment bonds in their possession. Actually, the purpose of the law was to add to the supply of free gold of the Federal Reserve banks by permitting them to substitute government securities for gold held by Federal Reserve agents in excess of the required 40 per cent, and to permit the expansion of Federal Reserve credit on the basis of this free gold through open market purchases of government securities, thus making it unnecessary for member banks to increase their discounts heavily in a period of severe depression.

Following the passage of the Glass-Steagall Act, the Federal Reserve banks resumed their easy money policy of 1931 with greatly increased vigor. Reserve bank holdings of United States securities increased from a daily average of \$743,000,000 in February to \$1,850,000,000 in August, thereafter remaining relatively constant during the rest of the year. As a result of this bond buying program, bills discounted for member banks fell from \$848,000,000 in February to \$282,000,000 in December, and member bank reserve balances rose from \$1,907,000,000 to \$2,435,000,000 in the same period. Meanwhile the Federal Reserve Bank of New York reduced its discount rate from $3\frac{1}{2}$ per cent to 3 per cent on February 26th, and from 3 per cent to $2\frac{1}{2}$ per cent on June 24th, and open market rates fell to previously unheard of low levels, the commercial paper rate, at $1\frac{1}{4}$ – $1\frac{3}{4}$ per cent in December, being the only rate in the short-term open markets above 1 per cent. Member banks ended the year with excess reserves of about \$575,000,000. In the course of the year, the amount of government securities used as collateral for Federal Reserve notes under Section 3 of the Glass-Steagall Act reached a high point of \$634,500,000 at the end of June, this amount being reduced to \$427,800,000 at the close of the year.

The success of the easy money policy of 1932, as measured in terms of business recovery, was nil. Yet it is less open to criticism than the heavy bond purchases of previous years. It undoubtedly helped to stem the tide of deflation and placed the stronger member banks in a position to expand credit rapidly once the demand for accommodation on a sound basis set in. It could not, however, cure the essentially unsound banking situations in various parts of the

country, the elimination of which were essential to a recovery in business.

Federal Reserve policy in 1933.—On January 5, 1933, the Board issued a statement concerning the decisions of the Open Market Policy Conference, which concluded its meeting on that day. The important paragraphs of that statement were as follows:³

"The first and immediate objective of the open-market policy was to contribute factors of safety and stability in meeting the forces of deflation. The larger objectives of the system's open-market policy, to assist and accelerate the forces of economic recovery, are now assuming importance.

"With this purpose in mind, the conference has decided that there should be no change in the system's policy intended to maintain a substantial amount of excess member bank reserves, the continuance of which is deemed desirable in present conditions. Adjustments in the system's holdings in the open-market account will be in accordance with this policy."

A policy in line with this announcement was followed until the banking difficulties of February and March 1933, made its continuance temporarily impossible. Following the banking crisis, the Administration decided upon a policy of reflation, the necessary powers to this end being granted in the Thomas Inflation Amendment of May 12, 1933, which provided, among other things, that the Secretary of the Treasury might enter into agreements with the Federal Reserve banks and the Board under which the Reserve banks would purchase up to \$3,000,000,000 of government obligations in the open market. It also provided that the Reserve banks would be relieved from any penalty on deficient reserves resulting from such purchases. After the passage of the Inflation Amendment the Reserve banks renewed their purchases of government securities in substantial amounts until their holdings reached a total of just over \$2,400,000,000. These purchases, however, were not made under any specific agreements with the Treasury.

A new phase of credit policy.—Beginning in 1933, credit policies of the Federal Reserve authorities were subject to new considerations and conditions. This was due, to part, to

³ *Federal Reserve Bulletin*, January 1933, pp. 1-2.

the enactment of a considerable amount of monetary and banking legislation and, in part, to the occurrence of war which, in the forties, naturally played a leading role in the determination of Federal Reserve policy. The following chapter will be devoted to a consideration of Federal Reserve credit policies that resulted from the changed circumstances referred to above.

CHAPTER 33

CREDIT POLICIES OF THE FEDERAL RESERVE SYSTEM (CONT'D)

The prewar period.—The Inflation Act of May 12, 1933, gave the Administration the power, among others, to issue \$3 billion in greenbacks. The Gold Reserve Act of 1934 made redemption of gold certificates by the Federal Reserve banks for the purpose of obtaining gold with which to settle international balances dependent on the consent of the Secretary of the Treasury, as noted above (Chapter 6). It also weakened the Reserve banks' ability to control the market, since the Secretary of the Treasury was authorized to use any part of the \$2 billion stabilization fund, not needed for exchange operations, to purchase United States government obligations in the open market. Finally, the Treasury was accumulating a very considerable amount in seigniorage on silver purchased under the Silver Purchase Act. Consequently, the Treasury had several billions of dollars that could be put into the market, if desired, to offset the effect of sales of government bonds by the Reserve banks. The Banking Act of 1935 increased and centralized the credit control powers of the Federal Reserve authorities, but, because of the powers mentioned, final control remained with the Treasury.

The actual policy of the Reserve authorities in 1934, 1935, and the first half of 1936 was largely negative. Holdings of government securities were maintained at \$2400 million, no additional purchases of moment being undertaken. Discount rates at the Reserve banks and open market rates sank to new low levels, and an extremely easy money condition prevailed throughout the country.

By the summer of 1936, the Board of Governors of the Federal Reserve System quite properly began to get alarmed at the possibility of bank credit inflation. When the dollar

was devaluated in 1934, it was sharply undervalued in relation to leading foreign currencies, with the result that gold began to flow into the United States in large amount as noted earlier (Chapter 29). The dollar remained undervalued for several years and this situation, combined with a flight of capital to the United States arising out of disturbed European conditions, led to a continuation of the gold inflow. As gold came into the country, it was sold to the Treasury, which paid for it with drafts drawn against its accounts with the Federal Reserve banks, thus building up the deposits of the importing member banks. The Treasury would then replenish its deposits with the Reserve banks by depositing gold certificates issued against the newly purchased gold. In this manner the reserves of the Federal Reserve banks were also increased.

By the middle of 1936, as a result of these continued gold imports, member bank reserves had mounted to a point where they were close to \$3 billion in excess of legal requirements. With the reserve requirements then in existence, these excess reserves would have permitted an expansion of currency and deposits in the banking system of \$60 billion, according to the Reserve authorities, in addition to the \$55 billion of currency and deposits then outstanding.¹

Consequently, on July 14, 1936, the Board of Governors announced an increase of 50 per cent in member bank reserve requirements, effective August 15, 1936. When this increase was put into effect, excess reserves of member banks were reduced to about \$1700 million. The gold inflow continued, however, and, in December 1936, excess reserves again exceeded \$2 billion. As 1936 drew to a close, it was generally believed that the Board of Governors would take further action to limit excess reserves early in the new year, although it was a matter for speculation as to whether such action would consist of a further increase in reserve requirements or a gradual liquidation of the Reserve banks' huge portfolio of government securities.

It has been indicated that the action of the Board of Governors in raising reserve requirements in August 1936 had been in part negated by the close of the year because of the

¹ *Federal Reserve Bulletin*, February 1937, p. 99.

continuation of heavy imports of gold. In December, the Treasury took a step to assist the Reserve authorities in their efforts at control by announcing that gold imports would henceforth be sterilized. The procedure was to be as follows: The Treasury would buy the imported gold, as before, with drafts drawn against its balances in the Reserve banks, but instead of replenishing its balances by the deposit of gold certificates, it would sell Treasury bills to the banks for this purpose. The banks, in buying the Treasury bills, would use their excess reserves and the importation of gold could consequently no longer augment the excess reserves of the member banks.

On January 31, 1937, the Board of Governors again raised reserve requirements by $33\frac{1}{3}$ per cent (to the full amount permitted by law), one-half of the increase to go into effect on March 1st and the remainder on May 1, 1937. The result of these two increases was to reduce excess reserves to about \$900 million. However, in March and April, presumably as a result of the final May 1st increase in reserves, member banks liquidated their government securities rather heavily, and the government bond market broke quite badly. As a result, the Federal Open Market Committee decided to support the market and bought some \$96 million of government securities, thus pumping that amount of funds into the market in the face of the May 1st increase in reserve requirements. The market for "governments" having stiffened appreciably, the Reserve banks ceased their purchases at the end of April 1937.

Meanwhile, the Treasury had continued to sterilize gold imports, holding the gold purchased in an inactive fund. In September 1937, \$300 million of this gold was released further to ease the money market, and, in February 1938, Secretary Morgenthau announced that, retroactive to January 1st, only gold imports in excess of \$100 million per quarter would be sterilized. Nevertheless, about \$1200 million remained in the inactive fund in April 1938. On April 14th, the Treasury desterilized this gold, plus \$200 million of other free gold in the Treasury, and the following day the Board of Governors reduced reserve requirements moderately. The combination of these actions was designed even-

tually to increase excess reserves from \$1700 million to about \$3800 million.

Actually, with a continued inflow of capital from abroad and an excess of exports, excess reserves of member banks continued to increase, going far beyond the last figure noted. By the fall of 1940, excess reserves had reached nearly \$7 billion and remained not far from this figure in the opening weeks of 1941.

In 1939, the Federal Open Market Committee abandoned the practice of maintaining a constant portfolio of government securities. Difficulty in replacing maturing Treasury bills led to a substitution of longer maturities in the summer of that year, an action that tended to strengthen the longer term markets. Later, in September, with the outbreak of war in Europe, the government bond market again broke badly. At this time the Reserve banks increased their "government" portfolio by \$400 million to \$2800 million. Later, the market strengthened markedly. By the end of the year, Reserve bank holdings were down to \$2500 million. A constant total was then held to the middle of 1940. Thereafter, a further strengthening of the market for governments led to further liquidation by the Reserve banks, so that by January 31, 1941, the portfolio had fallen slightly below \$2200 million to the lowest figure since the fall of 1933.

Federal Reserve policy in 1939 and 1940, then, was directed toward maintaining orderly conditions in the government bond market. It was felt that this policy would exert a beneficial influence on the capital market as a whole and would also help to protect the heavy government portfolios of the member banks.

Outlook for credit control in 1941.—In the early months of 1941, the outlook for the control of credit by the Federal Reserve authorities was not bright. The tremendous increase in excess reserves, already noted, had, in case credit started to expand rapidly, placed such expansion well beyond control by the Federal Reserve, either by open market sales or existing powers to raise reserve requirements. Moreover, the extensive defense program begun by the Administration made the danger of rapid credit expansion much greater than

would otherwise have been the case. So grave did the situation appear to the Reserve authorities that a statement, recommending remedial legislation and subscribed to unanimously by the Board of Governors, the twelve Federal Reserve bank presidents, and the Federal Advisory Council, was sent to both houses of Congress on December 31, 1940.

So important are the issues involved and so sound the recommendations contained in this document that the report is quoted verbatim, as follows:

"For the first time since the creation of the Federal Reserve System, the Board of Governors, the Presidents of the twelve Federal Reserve Banks, and the members of the Federal Advisory Council representing the twelve Federal Reserve Districts present a joint report to Congress.

"This step is taken in order to draw attention to the need of proper preparedness in our monetary organization at a time when the country is engaged in a great defense program that requires the coordinated effort of the entire Nation. Defense is not exclusively a military undertaking, but involves economic and financial effectiveness as well. The volume of physical production is now greater than ever before and under the stimulus of the defense program is certain to rise to still higher levels. Vast expenditures of the military program and their financing create additional problems in the monetary field which make it necessary to review our existing monetary machinery and to place ourselves in a position to take measures, when necessary, to forestall the development of inflationary tendencies attributable to defects in the machinery of credit control. These tendencies, if unchecked, would produce a rise of prices, would retard the national effort for defense and greatly increase its cost, and would aggravate the situation which may result when the needs of defense, now a stimulus, later absorb less of our economic productivity. While inflation cannot be controlled by monetary measures alone, the present extraordinary situation demands that adequate means be provided to combat the dangers of overexpansion of bank credit due to monetary causes.

"The volume of demand deposits and currency is fifty per cent greater than in any other period in our history. Excess reserves are huge and are increasing. They provide a base for more than doubling the existing supply of bank credit. Since the early part of 1934 fourteen billion dollars of gold, the principal cause of excess reserves, has flowed into the country, and the stream of incoming gold is continuing. The necessarily large defense program of the Government will have still further expansive effects. Government securities have become the chief asset of the banking system, and purchases by banks have created additional deposits. Because of the excess reserves, interest rates have fallen to unprecedentedly low levels. Some of them are well below the reasonable requirements of an easy money policy, and are raising serious, long-term problems for the future well-being of our charitable and educational institutions, for the

holders of insurance policies and savings bank accounts, and for the national economy as a whole.

"The Federal Reserve System finds itself in the position of being unable effectively to discharge all of its responsibilities. While the Congress has not deprived the System of responsibilities or of powers, but in fact has granted it new powers, nevertheless, due to extraordinary world conditions, its authority is now inadequate to cope with the present and potential excess reserve problem. The Federal Reserve System, therefore, submits for the consideration of the Congress the following five-point program:

"1. Congress should provide means for absorbing a large part of existing excess reserves, which amount to seven billion dollars, as well as such additions to these reserves as may occur. Specifically, it is recommended that Congress—

- (a) Increase the statutory reserve requirements for demand deposits in banks in central reserve cities to 26%; for demand deposits in reserve cities to 20%; for demand deposits in country banks to 14%; and for time deposits in all banks to 6%.
- (b) Empower the Federal Open Market Committee to make further increases of reserve requirements sufficient to absorb excess reserves, subject to the limitation that reserve requirements shall not be increased to more than double the respective percentages specified in paragraph (a). (The power to change reserve requirements, now vested in the Board of Governors, and the control of open market operations, now vested in the Federal Open Market Committee, should be placed in the same body.)
- (c) Authorize the Federal Open Market Committee to change reserve requirements for central reserve city banks, or for reserve city banks, or for country banks, or for any combination of these three classes.
- (d) Make reserve requirements applicable to all banks receiving demand deposits regardless of whether they are members of the Federal Reserve System.
- (e) Exempt reserves required under paragraphs (a), (b) and (d) from the assessments of the Federal Deposit Insurance Corporation.

"2. Various sources of potential increases in excess reserves should be removed. These include: the power to issue three billions of greenbacks; further monetization of foreign silver; the power to issue silver certificates against the seigniorage, now amounting to one and a half billion dollars on previous purchases of silver. In view of the completely changed international situation during the past year, the power further to devalue the dollar in terms of gold is no longer necessary or desirable and should be permitted to lapse. If it should be necessary to use the stabilization fund in any manner which would affect excess reserves of banks of this country, it would be advisable if it were done only after consultation with the Federal Open Market Committee, whose responsibility it would be to fix reserve requirements.

"3. Without interfering with any assistance that this Government may wish to extend to friendly nations, means should be found to prevent further growth in excess reserves and in deposits arising from future gold

acquisitions. Such acquisitions should be insulated from the credit system and, once insulated, it would be advisable if they were not restored to the credit system except after consultation with the Federal Open Market Committee.

"4. The financing of both the ordinary requirements of Government and the extraordinary needs of the defense program should be accomplished by drawing upon the existing large volume of deposits rather than by creating additional deposits through bank purchases of Government securities. We are in accord with the view that the general debt limit should be raised; that the special limitations on defense financing should be removed; and that the Treasury should be authorized to issue any type of securities (including fully taxable securities) which would be especially suitable for investors other than commercial banks. This is clearly desirable for monetary as well as fiscal reasons.

"5. As the national income increases a larger and larger portion of the defense expenses should be met by tax revenues rather than by borrowing. Whatever the point may be at which the budget should be balanced, there cannot be any question that whenever the country approaches a condition of full utilization of its economic capacity, with appropriate consideration of both employment and production, the budget should be balanced. This will be essential if monetary responsibility is to be discharged effectively.

"In making these five recommendations, the Federal Reserve System has addressed itself primarily to the monetary aspects of the situation. These monetary measures are necessary, but there are protective steps, equally or more important, that should be taken in other fields, such as prevention of industrial and labor bottlenecks, and pursuance of a tax policy appropriate to the defense program and to our monetary and fiscal needs.

"It is vital to the success of these measures that there be unity of policy and full coordination of action by the various Governmental bodies. A monetary system divided against itself cannot stand securely. In the period that lies ahead a secure monetary system is essential to the success of the defense program and constitutes an indispensable bulwark of the Nation."

These recommendations were sound and desirable, but they aroused no demonstration of enthusiasm by the Administration, and Congress showed no apparent intent to support measures along these lines if introduced into Congress. Even had the recommendations been favorably received, it is doubtful if any action would have been taken in view of the entry of the United States into World War II near the close of 1941.

Credit policies of World War II.—As was to be expected, the wartime credit policy of the Federal Reserve authorities

was one of close cooperation with the Treasury. This was essential in order not to impede the war effort. Whether the policy agreed upon was the most desirable one or not is another question, the answer to which will be considered somewhat later in the chapter.

In pursuance of its policy of cooperation, the Board of Governors undertook to maintain the prices of various issues of government securities in line with a fixed pattern. This was accomplished by the establishment of buying rates on Treasury bills and Treasury certificates of indebtedness and of buying prices on Treasury notes and bonds at the Federal Reserve banks. The buying rate on bills was fixed (in 1942) at $\frac{3}{8}$ of 1 per cent with a repurchase option attached to such purchases. Certificates of indebtedness were purchased at $\frac{7}{8}$ of 1 per cent, and notes and bonds were purchased at prices to yield varying amounts, with a maximum of $2\frac{1}{2}$ per cent on the longest-term issues.

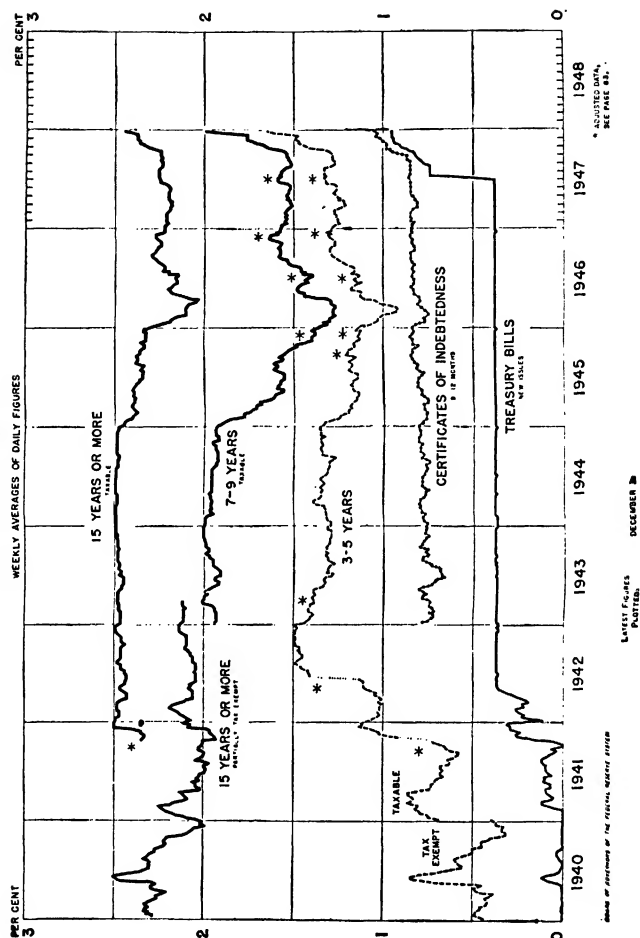
The success of the policy in accomplishing its aims is evident from the accompanying chart. Yields were maintained at the desired levels through 1944 and, in the case of the longer-term issues, dropped substantially in 1945. The reason for the latter movement was the demand of the banks for the longer-term issues with higher yields, this demand sending these issues to a substantial premium. Generally speaking, the banks invested relatively lightly in bills and certificates, selling these to the Reserve banks to replenish their reserves when necessary. Although the banks could also sell notes and bonds to the Reserve banks at stipulated prices, it was more profitable to obtain reserve funds through the sale of short-dated Treasury paper, retaining the higher-yield obligations for income-earning purposes.

Federal Reserve war policy, as above described, served a number of purposes. Of it, the Board of Governors said:²

"It encouraged investors to purchase securities without waiting for higher yields and to hold them without fear of loss from price fluctuations. It kept the market free from disorderly movements. It also retarded the growth in bank earnings on the securities they purchased. Finally, it held

² *Annual Report of the Board of Governors of the Federal Reserve System, 1945, p. 11.*

CHART 14
YIELDS ON U.S. GOVERNMENT SECURITIES



down the cost to the Treasury of interest charges on the greatly expanded public debt. As a result of these measures and policies, the Government experienced no difficulty at any time in raising the necessary funds. The average interest cost of the public debt to the Treasury was less than 2 per cent."

From this statement of purposes, it seems to be clear that by all odds the major purpose served by the policy was keeping down the cost to the Treasury of servicing the public debt and, considering the huge proportions that this debt attained, it is easy to see why this was the case. Saving money for the Treasury at the expense of individual investors, savings banks, insurance companies, and endowed institutions may be considered a questionable policy even in wartime. Quite apart from any ethical considerations that may be involved, however, in view of the manner in which the war was actually financed, the policy was almost certain to lead to difficulties of major proportions in meeting the problem of credit control in the postwar period.

Postwar problems of credit policy.—Commenting on the outlook for credit control in the early months of 1941, the author wrote as follows:³

"The Board of Governors, however, cannot alone prevent inflation, even if given the powers requested [in the report to Congress of December 31, 1940]. It is important that the financial program of the government be sound. Sound financing of the defense program requires the payment of as large a share of expenditures as possible from taxes. If the entire program cannot be financed in this way, added funds should be raised by the sale of government obligations outright to investors. These obligations should be paid for in full out of savings and should not be permitted as security for bank loans or as bank investments.

"If the Board of Governors of the Federal Reserve System were given the control powers they ask and if the Treasury were to finance its program as suggested in the preceding paragraph, the chances of preventing a severe inflation of bank credit would be good. Defense expenditures would be financed out of taxes and savings and the Board of Governors could then concentrate attention on preventing the expansion

³ From the 1941 edition of this text, p. 732.

of commercial or business loans beyond the point where further expansion would not be productive of added goods coming into the market."

Although the foregoing paragraphs were written with reference to the defense program, the suggestions would have applied equally to the war period as well. As has already been noted, the powers requested by the Board of Governors were not granted. As to Treasury financing, while attempts were made to follow a program of the sort suggested, the result fell rather far short of perfection. From the beginning of the defense program in 1940 to the end of 1945, the Treasury raised about \$380 billion. Of this huge amount, approximately 40 per cent was obtained from taxes, 36 per cent from the sale of Treasury obligations to nonbank investors, and the remaining 24 per cent, or roughly \$95 billion, from the sale of government issues to the banks. Had the bulk of the latter amount been obtained from one or the other, or both, of the two first-named sources, the situation confronting the Board of Governors at the close of the war would have been much easier to cope with than was actually the case.

As was pointed out earlier (Chapter 27), with the relaxation and then removal of price controls following the war a substantial price inflation set in, which, by the close of 1947, has carried the index of consumer prices to a level higher than the peak attained in the inflation which followed World War I. This naturally caused the Board of Governors great concern, since one of the Board's major functions is to attempt to halt any marked inflation resulting from the overexpansion of bank credit.

Under normal circumstances, the action that would be taken by the Board to control the overexpansion of bank credit would be to raise discount rates at the Reserve banks, re-enforcing this move by the sale of substantial amounts of government securities in the open market. The sale of governments would reduce the reserves of member banks, thus forcing them to borrow at the Reserve banks and come under the influence of the higher discount rates at the latter institutions. Additional restrictive pressure could be introduced by raising the reserve requirements of member banks, provided that the Board had any additional leeway in that direction.

Unfortunately, in the situation prevailing at the close of the war the Board of Governors was distinctly handicapped with respect to the institution of control methods. Of the methods normally available, only one—the increase of Reserve bank discount rates—was freely available. Reserve requirements at central reserve city member banks could be increased from 20 per cent to 26 per cent against demand deposits, but all other member bank reserve requirements were at the maximum percentage permitted by existing law.

The other weapon remaining to the Board was the sale of government obligations. It was here that the war finance program put a stumbling block in the way of effective action by the Federal Reserve authorities. It was, of course, legally possible to withdraw their support of the government security market, sell enough government obligations to force member banks to borrow at the Reserve banks and thus come under the influence of Reserve bank discount rates. Such action, however, would cause a sharp drop in government bond prices with attendant disruption in the market for government obligations.

Such action was not to be considered seriously, in the view of the Board, for a number of reasons. A large drop in government bond prices would cause heavy losses to the banks and other holders of marketable issues. Since these securities had been purchased with the understanding that their price would be supported, it would be unfair to allow it to drop severely. With regard to the very large volume of nonmarketable issues held by institutional and individual investors, this result would not occur; but these bonds may be cashed with a slight but definitely fixed penalty before maturity and any substantial increase in the yield of marketable issues would be likely to result in the cashing of large numbers of these bonds. The Treasury would then be confronted with the need for cash to pay these bonds, which could only be obtained from the sale of refunding issues with higher yields.

Actually, the whole problem is tied up with the cost of servicing the public debt. If the debt were not so large, the matter could be fairly readily adjusted by refunding existing low-rate issues with higher-yield obligations. With an interest-bearing debt of more than \$250 billion, however, there

is a serious question whether saddling an already inflated budget with a billion or two dollars more of debt service charges would be justified from the results that could be expected to accrue from it.

Under the circumstances existing in 1946 and 1947, the Federal Reserve authorities have quite understandably continued to support the government security market. Some efforts have been made to tighten rates. The artificially low buying rates at the Reserve banks on bills and certificates of indebtedness were abolished in the summer of 1947, the rate on Treasury bills rising to better than $\frac{7}{8}$ of 1 per cent and on certificates of indebtedness to better than 1 per cent by the year's end. Yields on notes and bonds also increased (as indicated on Chart 14). On December 24, 1947, the buying price on long-term bonds at the Reserve banks was lowered slightly (to just over par). Even this slight change led to confusion in the government bond market, and the Reserve banks were forced to purchase some \$900 million of governments at the newly announced price. It was made clear, however, that support would be afforded at this level.

Although some advances in discount rates have been instituted at the Federal Reserve banks, they have been slight and can have only a psychological effect. Obviously, if Reserve bank discount rates were raised substantially, it would pay member banks to secure new reserve funds by the sale of government obligations at the support level rather than to borrow at the Reserve banks. Moreover, selling government securities to the Reserve banks does not result in a liability on the books of the member bank and hence does not bring about the repressive effect that direct borrowing at those banks entails, as explained in the following chapter.

A proposed stopgap.—One can hardly blame the Federal Reserve authorities for the policy they have followed. They are impaled upon the horns of a dilemma, resulting from the method of financing the war, and are trying to make the best of a bad situation. In attempting to find some method by which both restraint on credit expansion can be imposed and the government security market can be supported, they have offered a plan that was first recommended in the Annual Report of the Board of Governors in 1945, repeated in the

1946 Annual Report, and was once more recommended by Mr. Eccles, chairman of the Board of Governors, in his testimony before the Joint Committee on the Economic Report in the special session of Congress on November 25, 1947. Since the Board considers this to be the best available measure of a temporary or stopgap nature, the gist of the plan is presented from Mr. Eccles' testimony as follows:

"We recommend for consideration, as the best alternative we have been able to devise, that all commercial banks be required as a temporary measure to hold some percentage of their demand and time deposits, in addition to their present reserves, in a special reserve in the form of Treasury bills, certificates and notes or cash, cash items, interbank balances, or balances with Federal Reserve Banks.

"Such a requirement would be far less onerous for the banking system than any other effective method that has been suggested in the long period in which this problem has been discussed by bankers, by economists, and public officials. Manifestly, such a requirement would have to be imposed gradually, if at all, as an offset, for example, to bank reserves created by gold acquisitions and by the purchase of Government securities from non-bank investors, and also to limit the too ready availability of reserves, now enabling banks to obtain them at will. A multiple expansion of credit can be built on these reserves at a ratio of fully six dollars of lending for every dollar of reserves. We would propose that the special-reserve requirement be limited by law to a maximum of 25 per cent on demand and 10 per cent on time deposits. It should be made applicable to all commercial banks. It would not be effective if applied only to member banks of the Federal Reserve System, and would be an unjustifiable discrimination.

"We recognize that this proposal is no panacea, but it would be an important available restraint, now lacking, to be applied equally to all commercial banks so that the individual banker would be in the same competitive situation he is today."

This proposal, advanced by the Board of Governors through the voice of its chairman, was not favorably received either by the Federal Advisory Council or by Secretary of the Treasury Snyder. The Council criticized it as giving the Board too much control over the assets of the commercial banks and as being a step toward government ownership or control. Secretary Snyder apparently felt that the situation could best be met by instituting a drive to sell government bonds to individual investors—the proceeds to be used to retire bank-held public debt—and by a possible sterilization of gold imports by the Treasury.

Leaving aside, for the moment, the criticisms of the proposal referred to above, it should be noted that perhaps the major purpose of the plan is to segregate the government security market from the rest of the investment security market, thus enabling the maintenance of low yields and high prices on government obligations while allowing the yield on other securities to be fixed in the competitive market. This was made clear by Mr. Eccles in his testimony when he said, "The plan, in effect, would divorce the market for private debt from the market for Government securities."

This is reminiscent of the days of the national banking system prior to 1914 when the price of low-yield government bonds was maintained at or above par through requiring them as security for national bank notes, private issues meanwhile paying substantially higher interest rates. There is, however, one important difference between the situation under the national banking system and that which would prevail at present (1948) if the Board's proposal were in effect. In the earlier period, practically the entire public debt was held by the national banks as security for their note issues. At present about 60 per cent of the public debt is held by nonbank investors. While most of these latter bonds are nonmarketable, they can, as noted earlier, be turned into cash before maturity with a slight penalty. Any substantial increase in the yield of private issues might easily lead to considerable liquidation of government bonds by nonbank investors. These issues would then have to be replaced with higher-yield obligations, unless low-yield refunding issues were forced on the banks as required secondary reserves.

Outlook for credit control in 1948.—As will be inferred from the discussion of the preceding paragraphs, the outlook for successful credit control is not bright. There would seem to be no really satisfactory way of putting on the brakes and maintaining the market for government bonds at the same time. If the Treasury's bond campaign should prove to be successful, the reduction in bank-held government securities that would result would be helpful. So, also, would the sterilization of gold imports should the Treasury adopt such a policy. The increase in member bank reserve requirements, either in the form recommended in 1940 or the recent

proposal of the Board, shows little promise of adoption. Moreover, foreign aid, wage increases, and a probable reduction in taxes will all tend to keep prices rising in spite of anything the credit control authorities may do. If the creation of bank credit money can be restricted to productive purposes and if existing holdings of government securities can be reduced, further price increases should not be great. To what extent this can or will be done, however, is problematical.

Conclusion.—We have now concluded a description of Federal Reserve policy from the establishment of the system to the present time. In the following chapter, we shall consider the theoretic possibilities of credit control. The subject is one about which there is considerable controversy, some students believing that satisfactory credit control points the way to more stable business and mitigation of business cycle movements, while others feel that it is of secondary significance. In either case, the subject is one that merits careful consideration.

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CHAPTER 34

POSSIBILITIES OF CREDIT CONTROL

Objectives of credit control.—In trying to estimate the possibility of obtaining a substantial degree of success in the control of credit, it is necessary first to decide just what the objective of credit control should be. The aims of the central banking authorities may be merely to maintain the convertibility of their notes and deposits into gold and to attain a fair degree of stability in the money market. If a gold standard is maintained, the first of these aims is, of course, of prime importance, and the second may be accepted as desirable, whether a country is on the gold standard or not.

It is felt in many quarters, however, that the control of credit may be used to attain more than these ends. It has been considered as a method of stabilizing the purchasing power of the monetary unit, of alleviating the ups and downs of the business cycle, and of attaining full employment. Actually, the first and third of these aims are closely bound up with the second. If the undesirable phases of the business cycle (overexpansion and depression) can be eliminated or sharply tempered, a fairly high degree of price level stability and employment will be attained. Accordingly, we shall have to conclude that the chief objective of credit control should be to mitigate the more extreme fluctuations of the business cycle, since a comparatively stable price level and a relatively satisfactory degree of employment would accompany the attainment of this end.

It is clear that, under certain conditions, the maintenance of the gold standard would not be compatible with a credit policy designed to assist in the stabilization of business and employment. It is not intended here, however, to debate the merits of maintaining the gold standard under such conditions. In the present chapter, we shall be concerned with the possibilities of credit control, from the point of view of

business stabilization, either in a country that does not have a gold standard or one with ample gold reserves to attempt control along the lines postulated.

The theory of credit control.—Assuming stability of business to be the aim of credit policy, the theory of credit control may be summarized as follows:

When business activity is increasing, the central bank takes no action so long as the goods that are being produced are moving regularly and freely through the channels of distribution to the consumer. Credit used to facilitate the production and distribution of goods may continue properly to be expanded so long as it is used productively for these purposes. In the words of the Federal Reserve Board,¹ "credit for short-term operations in agriculture, industry, and trade, when these operations are genuinely productive and non-speculative in character, that is to say, credit provided for the purpose of financing the movement of goods through any one of the successive stages of production and distribution into consumption is a productive use of credit. But when the effect of the credit used is to impede or delay the forward movement of goods from producer to consumer... credit is not productively used. The withholding of goods from sale when there is a market or the accumulation of goods for an anticipated rise of price is not a productive use. It is the nonproductive use of credit that breeds unwarranted increase in the volume of credit; it also gives rise to unnecessary maladjustment between the volume of production and the volume of consumption, and is followed by price and other economic disturbances."

When it becomes apparent that credit is being used non-productively, as shown by increasing inventories, rising wholesale commodity prices, and other elements leading to maladjustment, the central bank should attempt to restrict the further expansion of credit by selling open market securities and raising the discount rate. The sale of securities, by decreasing the supply of funds in the market, and the increase in discount rates, by cutting down the demand, should have the effect of restraining the expansion of credit for non-productive purposes. The initial effect of sales of open

¹ *Annual Report of the Federal Reserve Board* 1923, p. 34.

market securities is to increase the indebtedness of member banks at the central bank, the total amount of credit in use remaining approximately the same. The desire of the member banks to reduce this indebtedness, however, leads not only to a restriction of commercial advances to customers, but also to the withdrawal of funds from the short-term money markets, and, through the sale of high-grade bonds, from the investment market as well. The sale of bonds by the member banks leads to a rise in bond yields (i.e., a fall in bond prices), thus making long-term bond financing unprofitable, while the withdrawal of funds from the short-term market for brokers' loans tends to decrease bull speculative activity and to bring about a decline in stock prices with a corresponding decrease in the desirability of long-term financing through the issuance of stocks.

It will be seen from the foregoing analysis that the action of the central bank merely attempts to introduce quickly, and before the maladjustments in the business structure have gone too far, the same type of pressure that finally ended the expansion phase of the typical prewar business cycle.

As soon as the readjustment of the business situation has begun to take place, the policy of the central bank should be quickly reversed. By purchasing open market securities funds may be pumped into the market, while a decrease in discount rates tends to stimulate the demand for credit. The initial effect of the purchase of open market securities will be to bring about a reduction of member bank indebtedness at the central bank. With this reduction, member banks become more liberal in granting commercial loans to customers and also increase their open market loans and their purchases of high-grade bonds. The latter moves tend to stimulate bull speculation in the stock market and to harden bond prices, thus making long-term as well as short-term financing attractive. In short, once again, the central bank attempts to hasten the readjustment of business by introducing quickly and artificially the factors that naturally make for an upturn in business activity.

Variable reserves vs. open market operations as control instruments.—In view of the alterations in reserve requirements undertaken by the Board of Governors since 1936, it

is worth while to consider briefly the relative merits of such changes in requirements as compared with open market operations as a means of credit control. An increase in reserve requirements is without question a more effective means of control than the sale of securities in the open market. The reason for this is that an increase of reserve requirements not only eliminates excess reserves, but, at the same time, limits the possible expansion of bank credit on the basis of the excess reserves that remain after the increase. To illustrate, on the basis of the analysis in Chapter 17, the \$3 billion of excess reserves in the possession of member banks in the summer of 1936 would have furnished the basis for an expansion of bank credit in the form of demand deposits of approximately \$30 billion. Had these excess reserves been reduced to, say, \$900 million by the sale of \$2100 million of government securities by the Reserve banks, the excess reserves remaining would still have furnished the basis for a \$9 billion expansion of demand deposits in the banking system. Reduction of excess reserves to \$900 million by doubling reserve requirements, on the other hand, would limit the expansion based on the remaining excess reserves to about \$4500 million. Thus the ability to change reserve requirements gives the Board of Governors a weapon that is doubly effective as compared with open market operations.

In spite of their efficiency as a control device, alterations in reserve requirements are disturbing to the banking community and should be used only upon rare occasions. Moreover, changes in reserve requirements affect all banks alike, while the effect of open market operations is likely to fall first on the large city banks. Because of this, the latter method of control might be preferable under certain conditions. As a matter of fact, continuously variable reserves based on volume and velocity of bank deposits, as recommended by the Committee on Bank Reserves, combined with a judicious use of open market operations, would be more effective as a means of control than the purely arbitrary power to change requirements as granted the Board of Governors in the Banking Act of 1935.²

² For an extended and able discussion of the various aspects of this question, see L. L. Watkins, "The Variable Reserve Ratio," *Journal of Political Economy*, June 1936.

In any event, whether variation in reserve requirements is used in place of, or together with, open market sales and purchases for control purposes, the theory of control, as outlined above, remains unaffected. The use of variable reserves simply furnishes the credit authorities with an additional instrument to use in attempting to make their policy effective.

Prevention of overexpansion real object.—Although the theory of credit control, as just outlined, requires the intervention of the central banking authorities when business is both on the upgrade and the downgrade, it should be clear that the prevention of overexpansion, i.e., the prevention of the nonproductive use of credit, should be the real object of the control of credit; for the development of maladjustments in the business structure necessitates subsequent readjustments, and the extent of the latter depends in large part upon the extent of the former. To the degree, therefore, that the nonproductive use of credit can be avoided when business is expanding, the later readjustments can likewise be avoided. Moreover, if overexpansion has progressed far, the attempt to mitigate the severity of the ensuing readjustments may have the effect of delaying their completion and lengthening the period of recession and depression.

The success and failure of Federal Reserve credit policy.—Recalling the description of Federal Reserve credit policy in the preceding chapters, it appears that reserve policy was successful in 1923–1924 and in 1925–1926, but that it was not successful in 1928–1929 and in the following depression. In the earlier periods, the accepted procedure on open market operations and discount rate changes was apparently effective. We may, for the present, pass by these earlier endeavors at control and direct our attention to the difficulties of 1928–1929 and subsequent years.

The policy of the Federal Reserve was beset with especial difficulties in 1928 and 1929 because of the conflicting nature of the evidence regarding the business and the financial situations. It has already been noted that the business situation seemed unusually sound at this time, the flow of goods to market being unimpeded and regular, and the wholesale commodity price level showing an extraordinary degree of stability. The financial situation, on the other hand, was

decidedly less reassuring. Speculation was running rife in the stock market and loans to brokers for purposes of stock speculation were increasing rapidly. The problem of the proper central banking policy to pursue, in the circumstances, was perplexing. Some presumably capable observers averred that the Federal Reserve's sole responsibility was to maintain a stable level of commodity prices and that the speculative mania in the stock market was outside the scope of correct central banking policy. The Federal Reserve authorities, however, being directed by the Act to prevent the use of Federal Reserve credit for purposes of security speculation, finally felt compelled to take steps to curb the expansion of security loans, although the effort was largely unsuccessful.

The overexpansion of commercial and investment credit.

—The question of prime interest in the present connection is not so much whether the Federal Reserve authorities were justified in attempting to prevent the use of Federal Reserve credit for purposes of security speculation in obedience to the law, but rather whether or not the dictates of sound credit policy indicated such a course. To answer this question it is necessary to draw a distinction between two kinds of credit inflation. One of these may be termed investment inflation and the other commercial credit inflation. We shall consider both of these types in some detail.

Investment inflation.—If business stability is to be maintained, goods must be produced and distributed without undue interruption and delay, and this requires the existence of the desire and ability of consumers to purchase the goods offered on the market. A part of the income of consumers will be diverted to investment purposes, through the purchase of bonds or other securities; the remainder will be devoted to the purchase of consumption goods and services. Minor readjustments will have to be made in industry from time to time as consumer demand shifts from certain types of goods to others, or from consumption to investment goods; but, so long as money income is spent fairly regularly for goods and services of some sort, whether investment or consumption, no major upward or downward movements in business as a whole should occur.

Let us suppose, however, that a certain large number of individuals, wishing to have their cake and eat it too, continue to spend a large portion of their incomes on consumption goods, but also buy substantial amounts of securities, paying for the latter in the main with borrowed funds. So long as the borrowed funds come from the money income of the lenders, the situation would not be greatly changed, for the purchasing power would then merely be transferred from the lenders to the borrowers and would be spent by the latter. If, on the other hand, the borrowers obtain their loans from the banks, the latter crediting the checking accounts of the borrowers with the amounts of the loans, the quantity of purchasing power in the form of the check currency is increased, and the funds borrowed are not deducted from the income of others. The result is what we shall term investment inflation.

But what is the objection to this procedure, provided that, as seemed to be the case in the years prior to 1929, the increased purchasing power is largely offset by increased amounts of goods and capital? The danger lies in the fact that the loans are not perpetual and will have to be repaid at some later date. If a concerted demand for repayment occurs, the amount of purchasing power available to buy consumption goods is quickly reduced, while the repayment of the loans results in a contraction of the check currency rather than in a transfer of money to individuals who would themselves spend it for goods. Moreover, the process of liquidating security loans is likely to be long-drawn-out, since the loans must be largely paid off by degrees from the income of the borrowers.

Illustration from the experience of the United States.—The situation in the United States, before and after the stock market crash, is illustrative of this point. The security loans of all member banks of the Federal Reserve System increased by just over \$3 billion between June 1925 and June 1929. This increase naturally permitted an increase of security prices on the stock exchange and was one of the conditions essential to the speculative orgy that culminated in October 1929. Following the break in the stock market, call loans to brokers were sharply reduced, but a large part of this

reduction was a result of the shifting of call loans to brokers to customer loans on securities, the total of member bank security loans (brokers' loans plus customer loans) increasing very slightly during the remainder of the year. Between the close of 1929 and December 31, 1931, total security loans of member banks decreased by over \$3 billion, bringing the amount of such loans back to the level of June 1925.

A reduction of security loans of this magnitude is certain to reduce consumer purchases of goods and services. As security prices fall, the bankers require added collateral, or a reduction of loans to a point where existing collateral is adequate, and the borrower must use part of his income to meet the banker's requirements. Often, rather than lose his stocks and bonds through forced sale by the banker, the borrower will cut his consumption to a minimum in order to reduce his indebtedness at a time when his own income may have shrunk because of the depression. Moreover, the sale of collateral by bankers to protect their loans in cases where the borrowers are unable to maintain satisfactory margins exerts a continuously depressing effect on security prices, making the reduction of previously adequately margined loans necessary by weakening or eliminating the margins.

It is not intended to imply that the liquidation of security loans was the only important force making for the duration and intensity of the depression following the downturn in business in 1929. Widespread bank failures resulted in a loss of confidence in the banks and an accompanying increase in currency hoarding, and these factors, in turn, increased the difficulties of the banks and made further liquidation of loans and investments imperative. Nevertheless, the liquidation of investment loans was a complicating and disturbing factor throughout and cannot be lightly dismissed.

The control of investment credit expansion.—It must be admitted, however, that the expansion of investment loans by the banks in the years prior to the stock market crash was unusually rapid. It is therefore pertinent to ask whether such credit expansion could not be controlled, along with the expansion of commercial credit, by the central banking authorities. There are two reasons for believing that control of this sort would not be likely to prove successful.

In the first place, it is difficult to determine exactly when overexpansion of security loans may be said to exist. About the only feasible method of ascertaining this point would be to govern the expansion of such loans by the market prices of the securities purchased with the proceeds of the loans. It would be necessary for the banking authorities to endeavor to put an end to the expansion of security loans when stock prices, say, averaged more than ten times earnings. But this is an entirely arbitrary procedure. With the increase in capital accumulation over a period of years, it might well be that fifteen times earnings would represent a more reasonable valuation.

Any other basis than stock prices, as a criterion of overexpansion, is even less satisfactory. The existence of speculative commitments as a guide to credit policy is ruled out by the fact that stock speculation is always existent in some degree. Moreover, any attempt to determine the exact lengths to which speculation may proceed, without going beyond the range of control through rate advances, is more likely to be futile than not.

A second deterrent to the successful control of investment credit expansion is to be found in the inability of the banking authorities to time their restrictive policy to meet the needs of both commercial and investment credit policy. It is quite possible that business may be proceeding satisfactorily, commercial credit being productively used, at a time when a restriction of investment credit is deemed desirable. To tighten money in order to restrict the expansion of investment credit at such a time would be to hamper business unnecessarily and improperly. Failure to take restrictive measures, on the other hand, would court speculative excesses and final drastic reaction in the stock market.

The solution of the difficulty would appear to be legally to prohibit the creation of check currency for the financing of any but commercial commitments, giving the central banking authorities the right to define legitimate commercial loans within the meaning of the law, as the Board of Governors now defines and rules on eligible paper. If security and other investment loans were limited in amount to savings deposits, properly defined, there could be no overexpansion

of investment credit as the term has here been understood.

Bond investments of banks.—It is also possible to create check currency through the purchase of bonds by the banks. In periods of depressed business, as the banks have acquired surplus reserves through the contraction of commercial loans, they have tended to use these reserves to purchase high-grade, marketable bonds, thus preventing the check currency from contracting as would otherwise be the case. This form of investment credit expansion, however, differs from that resulting from the extension of security and investment loans in that the timing of the expansion assists, rather than hinders, credit control. The effects of bond purchases in a period of depression are to raise bond prices, making long-term financing more attractive, and to furnish a quantity of check currency that may assist the recovery of business.

In a period of depression it will usually be found that cash balances have increased, or, in other words, that the income velocity of circulation has declined. The creation of check currency through bond purchases tends to offset somewhat this decrease in velocity by increasing the purchasing power of the sellers of the bonds. The funds so received may not, probably will not, be used at once to purchase goods, but are more likely to be devoted to the retirement of indebtedness previously incurred in the period of more active business. By helping to hasten the debt retirement process, however, the banks, through their bond purchases, help to place business in a position where recovery will most readily occur.

Another factor that differentiates bond purchases from security loans is the ease with which the former may be controlled by the central banking authorities as compared with the latter. Since bonds are commonly purchased with the banks' surplus reserves in times of depression, a revival of demand for commercial loans naturally leads to a liquidation of bonds by the commercial banks in order that they may obtain the funds to meet the demands of commercial borrowers. The process of liquidation can easily be hastened by the central bank, if deemed necessary, through the sale of open market securities. In the opposite fashion, the purchase of open market securities in the course of the depression can be used to stimulate bond purchases on the part of the

commercial banks. Thus the central bank has adequate means of controlling the situation.

If the commercial banks have conducted their business along sound lines (i.e., have extended only commercial credit) in periods of expanding business, the purchase of bonds in periods of depression is not likely to be a source of embarrassment or danger. When, on the other hand, the banks enter the depression period with a large mass of slow, nonliquid loans, the purchase of large quantities of bonds may prove disastrous. The failure of a number of banks, as a result of their frozen condition, may well lead to a loss of confidence in the banking system attended by bank runs by both demand and savings depositors. The result is a rapid and concerted liquidation of bonds by the banks, which leads to a break in the bond market and an enhancement of banking difficulties. This explains, in part, the futility of the easy money policy of the Federal Reserve in 1931 as well as the disastrous slump in bond prices in the closing months of that year.

The control of commercial credit expansion.—Assuming that the banks are not permitted to create deposit currency on the basis of investment loans, our next task is to appraise the possibility of controlling the expansion of commercial credit by the central bank through open market operations and alterations in the discount rate. The manner in which the presence of overexpansion is detected has already been shown. So long as production is on the increase; so long as the transportation system is working efficiently; so long as employment indexes show idle labor that can be put to productive use; so long as goods are passing to the consumer at a satisfactory rate and excessive inventories are not being accumulated; in short, so long as credit is being productively used, there is no overexpansion. When the nonproductive use of credit appears, on the other hand, overexpansion exists in some degree.

The question that remains to be answered is whether overexpansion, having been detected, can be controlled by tightening money rates. Will the rate increases resulting from central banking policy be effective in securing the desired curtailment of credit? There seems to be doubt in the

minds of some. Snyder writes,³ "The direct effect of interest rates upon the course of the business cycle seems less than many have supposed.... In the main the more important changes in business seem to take place before the movement of interest rates could be of any material importance. All of which has an important bearing upon the problem of stabilizing trade or moderating the extremes of the business cycle by means of changes in the bank rate." This evidently is meant to imply that changes in the bank rate are fairly useless in the control of business expansion through the regulation of the amount of credit. Can anything be said on the other side of the question? While it is true, as Snyder points out in another place,⁴ that bank interest forms such a small part of the cost of doing business for the run of producers as to be of little moment, this is not true in respect to the bulk of speculative activity. Speculation, whether in goods or securities, is done largely on a credit basis. Here interest is practically the sole cost of doing business. When merchants stocked up heavily with goods on the upswing of the typical prewar business cycle, because they expected the prices of these goods to advance, they carried the goods almost entirely by means of credit advances. After prices had begun to mount rapidly, an increase of moderate amount in the discount rate (the price of carrying the goods) naturally would have had little effect, but an increase coming before the rise in prices became pronounced would unquestionably have had a strongly deterrent effect on such operations.

In the main, just such speculation in goods is to be blamed for some of the major difficulties that have occurred in the past during the upswing of the business cycle. The increase in forward ordering many times has led manufacturers to overestimate the intensity of the consumer's demand for their goods, with resultant misguided and misdirected production. It seems reasonable to suppose that increases in discount rates, if made effective at an early enough period in the cycle, would put a damper on this speculative propensity of merchants and would result in a more reasonable

³ *Business Cycles and Business Measurements*, p. 229.

⁴ *Ibid.*, p. 227.

adjustment of productive activity to consumer demands on the part of manufacturers. This being the case, it would make little difference whether bank interests were a minor cost to the manufacturers themselves or not.

The effectiveness of central bank policy, then, would seem to depend in large measure upon the proper timing of the steps taken to restrict expansion. There is always a tendency, in periods of expanding business activity, to wait too long before introducing restrictive measures, with the result that, when steps are finally taken, they must necessarily be more severe, and will probably be less effective, than would have been the case had they been followed at an earlier point.

Complete stability unattainable.—Although the control of commercial credit may be fairly successful if central banking action is properly timed, the complete elimination of cyclical movements in business is not to be expected. It may be pointed out, for example, that a widespread increase in installment selling, such as occurred between 1922 and 1929, results in an increase in the production and sale of goods that cannot be permanently maintained. Changes in the spending habits of the community of this sort are outside the range of central banking control, yet may have significant effects on business activity. Changes in the financing methods of business concerns, such as resort to the capital market to obtain working capital funds, are also likely to hamper central banking control of commercial credit expansion. In addition, errors in judgment on the part of the central banking authorities as to the proper timing of control measures are bound to occur and may vitiate the success of these measures. Nevertheless, a relatively high degree of stability should be attainable if the banking authorities are properly equipped to handle the situation under the most favorable circumstances.

Commercial credit deflation short-lived.—Even assuming the failure of the central bank to prevent an overexpansion of commercial credit, whether from undue delay in initiating restrictive measures or from the operation of factors outside of its control, the ensuing deflation will be relatively short-lived as compared with the deflation of investment loans. Any deflation of credit involves loss and suffering to

certain parties. In the case of commercial credit deflation, the loss falls heavily upon businessmen. Goods must be offered at prices lower than cost in order to move them, inventories must be written down to the new market valuations, and debts must be paid without any corresponding reduction. Many small, inefficient enterprises may go to the wall, but the better-managed concerns, although suffering substantial losses, continue to survive. The economic indigestion, however, is quickly cured. Excess goods are eliminated from the system, and, after a brief convalescence, normal functioning is again in order.

We have already seen, on the other hand, that the liquidation of investment loans out of income in a period of depression is a long and painful process, reducing the consumption demands of the borrowers and hindering business recovery. If investment loans, other than those based on real savings, could be eliminated, therefore, periods of business depression should be considerably shortened. If, in addition, the central banking efforts at credit control are moderately effective, the amplitude, as well as the duration, of cyclical swings in business would be very materially decreased.

Legislative changes essential.—If the Board of Governors is to be properly equipped to undertake the control of credit in the United States with some probability of continuous success, certain alterations in the banking laws are essential. In the first place, as already suggested, it is necessary to eliminate the creation of check currency based on investment loans. As call loans to brokers fall into this class, this reform would be extremely difficult to effect. Brokers' loans have always been considered as an excellent secondary reserve by the banks, and any attempt to substitute loans based on savings deposits for the existing type of call loans to brokers would arouse bitter opposition. Nevertheless, such a change is essential to adequate credit control, as the events of 1927-1929 should demonstrate.

In the second place, time deposits should be more strictly defined than at present to represent real savings rather than temporary funds masked as investment surpluses. In this connection it would assist matters to require the segregation of the assets of the savings departments of departmental banks

with a view to preventing the intermingling of commercial and savings functions.

Thirdly, since speculative activity in business tends to show up first in an increased velocity of turnover of the check currency, it might be well to institute a reserve requirement for demand deposits based on a combination of volume and activity, as suggested by the Committee on Bank Reserves of the Federal Reserve System.

Finally, and perhaps most significant, a unified banking system is needed. It would be highly desirable to require all banks doing a commercial business to become members of the national banking system, or, at least, to join the Federal Reserve System. Nonmember state banks would then be restricted to a purely savings or trust business as they properly should be. It seems needless to point out that the present heterogeneous mixture of state and national, member and nonmember banks, many of them engaged in all types of banking without proper segregation of the business of the different departments, is not conducive to successful credit control by the Federal Reserve System. Such control depends essentially on full cooperation between the individual banks of the system and the central bank, and such cooperation can only be acquired, in turn, through a unified and closely knit banking system.

Postwar difficulties.—It is obvious, from the discussion in the final pages of the preceding chapter, that following a policy of the type suggested in this chapter would be fraught with difficulties in the postwar period even with the legislative changes suggested above. It is interesting to note, however, that the Board of Governors has recommended certain legislative changes that would be of assistance toward this end. As an alternative to the secondary reserve proposal, described in the preceding chapter, the Board suggested, in its 1945 report, a bond-limitation plan. This would limit by law "the amount of long-term marketable securities, both public and private, that any commercial bank could hold against its demand deposits".⁵ As stated by Thomas and

⁵ Thomas, W., and Young, R. A., "Problems of Postwar Monetary Policy," *Postwar Economic Studies* No. 8, Board of Governors of the Federal Reserve System, 1947, pp. 115-16.

Young, of the research division of the Board, "in a sense this plan would merely extend the principle, recognized in banking law and pursued during the war, of restricting investment of demand deposit funds in long-term assets."⁶ These authorities suggest that the limitation might well be applied to real estate and real estate loans as well as public and private marketable bonds.

Such a recommendation, if adopted, would be a step in the direction—suggested in this chapter—of limiting the investment-type assets of commercial banks to their capital funds and savings deposits. It is also worthy of note that the recommendation of the Board includes the application of the plan to all commercial banks—member and nonmember—which is as it should be.

Another alternative proposal of the Board in its 1945 report was to give the Board more extended power to alter reserve requirements as recommended in the joint report to Congress in 1940, this power also to extend to all commercial banks, member and nonmember. In such a case, it might be desirable to pay a certain rate of interest on reserve balances in order to compensate the banks for the reduction in earning assets that an increase of reserve requirements would entail.

In the judgment of the author, a combination of this alternative with the bond-limitation plan, coupled with gold import sterilization and savings bond sales to private investors as suggested by the Treasury, would prove beneficial to the Federal Reserve authorities in attempting to control credit along sound lines. At the beginning of 1948, the passage of recommended control legislation appeared highly doubtful. Yet, as stated by Thomas and Young, "without such control, the national objective, as declared by Congress, of economic stability at the highest sustainable levels of production and employment may be seriously jeopardized."⁷

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⁶ *Ibid.*, p. 116.

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CHAPTER 35

THE PROBLEM OF THE STANDARD

Introduction.—Between the 1870's and World War I, the gold standard was in general use throughout the civilized world and was considered by the majority of monetary theorists, as well as by practical men of affairs, to be the best standard available. The advent of World War I, with its attendant monetary disorder, naturally focussed attention on monetary affairs and raised the question of whether the gold standard was, after all, as satisfactory as had been supposed. Various reformers suggested substitutes of the "managed currency" genus, but the governments concerned finally decided to return to gold, with the result that, by 1928, the gold standard was again in practically universal use. For reasons already considered (Chapter 29), the international gold standard failed to function satisfactorily and, in the early 1930's, a fairly general departure from the gold standard occurred. This situation prevailed at the outbreak of World War II. Since the termination of the latter war, some attempt at international monetary stability has been made, but the problem of the standard—internationally and domestically—still remains one of first importance in the monetary and economic fields.

In the present chapter, we shall attack this question, considering first the attributes of an ideal standard of value and then, with an eye on the actual situation, trying to determine what would be the best practical solution under existing circumstances.

The ideal standard.—It has been assumed throughout this book that the standard of value should have a constant purchasing power over consumption goods and services. There are, however, other possible standards for which a good case can be made. It will be necessary to examine these other possibilities, therefore, before attempting to appraise the

relative merits of the gold standard and some type of managed currency system.

A stable income standard.—There is much to be said for a standard of value that remains stable in terms of money income. From the point of view of justice, this is more satisfactory than a stable consumption standard. Under a stable income standard, the total amount of money would have to be kept stable relatively to population. Then, if the economic productivity of the country were to increase more rapidly than the population, the goods price level would tend to fall. If, on the other hand, productivity were increasing less rapidly than population, or were actually decreasing, the price level of goods would tend to rise.

A goods price level that varied inversely with productive activity in the manner suggested would yield the greatest degree of justice to creditors, for they would then participate with the other classes in the community in either an increase or a decrease in productivity. To illustrate, a creditor who had loaned \$1000 at a given date would have parted with purchasing power over a quantity of goods that we shall call x . Ten years later, say, when the loan is repaid, the productivity of the country has increased relatively to population by one-fourth. At the maturity of the loan, then, the \$1000 would purchase $1.25x$ goods, and the creditor would share in the increased productivity, not at the expense of the entrepreneur who would have more goods with which to repay the loan, but merely in proportion to the increase in goods that his capital helped to make possible. If productivity were decreasing, relatively to population, on the other hand, the creditor would quite properly share in the decrease.

When a country has an inflexible system of wages, a stable income standard also has definite advantages. In such circumstances, money wages, like debt and interest payments, tend to become fixed in amount. The same advantages, therefore, would apply to the laborer and salary earner as to the creditor under such a standard.

The maintenance of a stable income standard, however, is not always compatible with the operation of the international gold standard. For example, if, in country *A*, productivity is decreasing (the goods price level rising), while,

in country *B*, productivity is increasing (the goods price level falling), gold will begin to flow from *A* to *B*. An attempt on the part of *A* to maintain a stable income standard under these conditions would result in a continuance of the gold outflow until *A* would be forced off the gold standard.¹

A gently rising price level.—While justice to creditors and other recipients of fixed money incomes may seem to demand a stable income standard, there is evidence to indicate that such a standard is not conducive to a high degree of business activity. Dr. Willard Thorp, in a study of business annals, found that, in England, the number of years of prosperity per year of depression amounted to 1.0, 3.3, and 2.7 in three periods in which the trend of the wholesale price level was upward, as compared with 0.9 and 0.4 in two periods characterized by downward trends. In the United States, the figures were 2.6, 2.9, and 3.1 with rising trends of the commodity price level, and 0.8 and 0.9 in two periods in which the trend was downward.² It seems impossible not to agree with Dr. Mitchell that "these results are so uniform and so striking as to leave little doubt that the secular trend of the wholesale price level is a factor of great moment in determining the characteristics of business cycles."³

Because of the significance of the trend of commodity prices on business activity, it may be urged with some force that the most satisfactory sort of currency regulation would have as its objective the maintenance of a gently rising commodity price level. This type of regulation would have to be effected at the expense of some justice to the recipients of fixed money incomes; but it may not be thought too outrageous to wink at the blindfolded lady with the scales if the industrial plant can thereby be more regularly and completely utilized and the labor force of the country more fully employed.

The type of credit control that is directed toward the maintenance of a gently rising price level is also incompatible with adherence to the gold standard. It might be accomplished for a time by the institution of various economies in

¹ See the *Report of the Gold Delegation*, League of Nations, Geneva 1932, p. 28.

² See W. C. Mitchell, *Business Cycles* (New York, 1927), pp. 410-11.

³ *Ibid.*, p. 411.

the use of gold for monetary purposes. Eventually, however, without the discovery of improbable new sources of gold production, the gold basis of the currency would become so attenuated as to make necessary a departure from the gold standard.

A stable consumption price level.—A stable price level of consumption goods and services is now seen in the light of a compromise standard that retains in part the characteristics of both of the standards previously described. Under such a standard, the recipients of virtually fixed incomes (bondholders, salaried workers, doctors, etc.) do not share in an increase in national productivity to the extent that they would under a stable income standard. Neither, however, do they share the burden of decreased productivity in periods when the trend of productive activity is downward. In fact, due consideration would seem to indicate that the creditor is not so badly off under a stable consumption price level as it might appear at first glance. After all, the bondholders—the chief creditor class—are mainly concerned with safety. If they get repaid, in interest and principal, in dollars that will purchase the same amount of goods and services as the dollar loaned, they have small cause for complaint. It is the entrepreneurs who take the risk of success or failure, and, if they profit somewhat at the expense of creditors when successful, it is perhaps not improper that they should. The capitalist has the choice of buying stock rather than bonds if he so desires. Therefore, if he chooses bonds, he has little right to complain if he gets back the same amount of goods and services with which he parted, plus interest on his investment.

Through permitting the gains from increased efficiency to go to the entrepreneur, on the other hand, a stable consumption price level offers a stimulus to industry, which, although less than that of a rising price level, should be ample to maintain a high rate of productive activity with greater justice to creditors than a rising price level would afford. Our conclusion then must be that a stable consumption price level affords the most satisfactory standard of value from all points of view and that it is, therefore, the standard we should attempt to maintain.

THE CASE AGAINST THE GOLD STANDARD

The gold standard and a stable price level.—Since, when the gold standard is functioning properly, the effects of gold movements are automatic and reciprocal, it follows that the value of gold will tend to be the same in all countries operating on the gold standard. Stability in the trend of the price level in gold standard countries, therefore, depends upon a correct adjustment of the monetary demand for gold on the part of those countries to the quantity of gold available for monetary purposes. But, prior to World War I, the monetary demand for gold tended to be relatively constant, with the result that the trend of the price level tended to vary with the supply of gold, allowance being made for long-term changes in world productivity.⁴ It will therefore be desirable to appraise the gold standard in respect to its stability, from the point of view both of past performance and future possibilities, assuming the supply of gold to be the determining factor in the attainment of such stability.

The past performance of the gold standard.—Viewed in the light of historical performance, the gold standard does not have a highly exemplary record. Using Mr. Kitchin's figures for the period 1850–1913, the relative stock of gold money,⁵ which follows closely the secular trend of the price level, rose from 100 in 1850 to 139 in 1860–1862, thereafter falling to 91 in 1891–1896 and thence rising to 101 in 1909–1913. These movements correspond to a rise of 39 per cent, a fall of 35 per cent, and a rise of 11 per cent, respectively, in the three periods noted. These are rather wide changes and do not speak too well for the stability of the gold standard.

⁴ In this connection see studies by Professor Gustav Cassel and Mr. Joseph Kitchin, *First Interim Report of the Gold Delegation*. Annexes X and XI, League of Nations, Geneva, 1930. See also, L. C. Wilcoxon, "World Prices and Precious Metals," *Journal of the American Statistical Association*, XXVII, 129-40.

⁵ The relative stock of monetary gold represents the ratio of the actual stock to the stock of 1850 increased at the constant rate of 3.1 per cent. per annum, this being the rate of increase deemed necessary to offset the long-term increase in productivity and trade during the period. Although many countries were on a bimetallic standard during part or all of the period 1850–1880, the fact that gold was generally overrated at the mints of these countries led, in practice, to the existence of the gold standard in bimetallic countries during those years.

The probabilities for the future.—If we continue the assumption that the monetary demand for gold, relatively to the trend of economic productivity, will remain practically constant in the future, the outlook for the stability of the purchasing power of gold hinges largely on the rate of future gold production. There has been a wide difference of opinion on the part of students of the problem on whether future gold production would prove sufficient to keep pace with the expanding needs of industry, assuming economic productivity to continue its prewar rate of increase of about 3 per cent per annum. For the most part, at least, up to 1929, the weight of evidence was on the side of an impending gold shortage, the most careful estimates indicating that world gold production would begin to decline between 1932 and 1935, the rate of decline being most rapid between 1940 and 1945, and somewhat slower thereafter.⁶ The result of such a decrease, unless offset by other factors, would be a tendency for the price level to decline over a period of years rather than to remain stable.

The advantages of a "managed currency."—The chief advantage of a managed, irredeemable paper currency would be freedom from dependence on variations in gold production (or the production of some other metal) in maintaining a stable long-term trend of the commodity price level. Assuming an able managing body, it would be possible to adjust the volume of currency to the trend of the country's productivity without reference to the adequacy of the monetary gold supply. A second advantage would be freedom from dependence on the monetary and credit policies of other countries in attempting to prevent extreme cyclical movements of business at home. Under the gold standard, effective operation demands that domestic credit policy be linked with credit policy elsewhere. If country *A*, for example, permits credit to expand too rapidly and prices to rise, so that gold flows to country *B*, whose prices have not risen, country *B* should properly ease credit and encourage a rise of prices in order to induce the reciprocal action of the loss of gold

⁶ See *op. cit.*, *First Interim Report of the Gold Delegation*, Annexes I-IX and XIII, especially Annex VII.

from *A*, and thus help to stop or reverse the movement of gold. Finally, resort to a managed, irredeemable currency would obviate the substantial investment in gold reserves that adherence to the gold standard involves.

THE CASE FOR THE GOLD STANDARD

Past performance not entirely discreditable.—Turning to the arguments in favor of the gold standard, a further examination of its historical record shows that its performance in the past has not been as unsatisfactory as would appear at first glance. Referring again to Mr. Kitchin's estimates of relative monetary gold supply, which closely approach the secular trend of the price level, it will be noted that the widest movements of relative monetary gold supply took place in the period 1850–1891, when the relative supply of monetary gold first rose 39 per cent and then declined 35 per cent, while from 1891–1896 to 1909–1913 the increase was but 11 per cent. It was only in the latter period, however, that the bulk of the world's gold was produced on an industrial cost basis. It is only with reference to the latter period, therefore, that the past performance of the gold standard—as indicative of future performance—may properly be judged. If, then, we confine our attention to the twenty or twenty-five years prior to the outbreak of World War I, the record of the gold standard, as regards stability of value, although not perfect, is far from discreditable.

The prospective supply of gold.—But past performance alone is not a sufficient basis for judgment. It is also necessary to consider prospective gold production in the years to come. For a number of years prior to the depression, experts on gold production were making gloomy forecasts of an impending scarcity of gold, i.e., an impending decline in the rate of gold production, which would lead, it was feared, to a long downward trend in prices. Decreasing costs of gold production during the depression, coupled with higher money prices for gold as a result of practically universal currency depreciation, have, however, changed the entire picture. Gold production increased sharply each year after 1929, and in 1936 reached 35,254,000 ounces, as compared with 22,594,000 ounces produced in 1915, the latter being the

high record prior to 1932. In fact, "it has been forecast that before long the world's gold production may be at the rate of 40 million ounces per annum, or more than twice as high as in 1929."⁷ Moreover, in view of the widespread devaluation of currencies that has occurred, a given number of ounces of gold comprise a larger number of money units than before the depression.

It is obvious, then, that the large existing and prospective supply of gold constitutes a problem in connection with a possible return to the gold standard. If the gold were allowed to act freely on prices, as under prewar conditions, a fairly rapidly rising price level extending over a period of years would be in prospect. There are, however, certain means of combating such a tendency. Gold could once more be put into circulation, in the form of gold certificates rather than gold coin if paper money is preferred. Reserve requirements for member banks have already been raised in the United States, and action of a similar nature could be taken by other check-using countries. Central banks could hold larger gold reserves against their liabilities than has been customary in the past. In short, gold could be substituted for credit money to the extent necessary to offset the effects of increased production. If, then, at some future date, gold production should decline, it would be possible, by a reversal of the measures noted, to offset the effects of the lowered production on prices. On the whole, then, it seems reasonable to conclude that a fair degree of stability in the value of gold could be maintained, if desired, for a good many years to come.

The advantages of the gold standard.—The gold standard has certain definite advantages over a managed irredeemable paper currency that make its retention desirable, even at considerable expense and trouble. Its major advantage is that it makes for stability and certainty in international trade. Under a managed currency, exchange rates would fluctuate with fluctuations in prices of international goods and services, tending thus to offset changes in price levels in various countries. This would introduce an element of

⁷ Seventh Annual Report of the Bank for International Settlements, reprinted in part in the *Federal Reserve Bulletin*, June 1937, p. 564.

uncertainty into foreign trade that would prove highly detrimental to its maintenance or extension. External stability would be sacrificed to internal stability, theoretically, but, practically, the disturbance to international trade would probably make internal stability difficult, if not impossible, of accomplishment.

A second argument in favor of the gold standard is its political expediency. An irredeemable paper currency is too easily subject to expansion under political pressure to a point where it is no longer amenable to control. Governments are less prone to abandon the gold standard in order to inflate the currency than they would be to resort to inflation for political purposes under an irredeemable currency. The final restrictive pressure of maintaining gold redemption is also a good check on possible experimental tendencies on the part of central bank managements.

Finally, it should be pointed out that the gold standard, under present conditions, is not incompatible with a large degree of management of the currency. True, its management presents difficulties in the way of international cooperation that are of large magnitude. If each gold standard country, however, is finally able to attain a fair degree of internal stability, the gold standard would provide both external and internal stability alike.⁸ If any country fails to prevent an overexpansion of commercial bank credit, on the other hand, the necessity of maintaining the gold standard will assist in bringing about the readjustment more quickly and surely than would otherwise be the case.

The present outlook.—The desirability of stable international monetary conditions is scarcely open to question and the foregoing analysis would indicate the superiority of the international gold standard, operating with some degree of international cooperation, as superior to a large group of independently managed currencies. It would seem at first glance as though the International Monetary Fund was the best possible arrangement for attaining international monetary stability and, eventually, an approach to an international

⁸ Some international control of foreign lending by different countries should also be instituted in order to obtain the maximum of both internal and external stability under the gold standard.

gold standard operating under a considerable degree of international cooperation.

Actually, the first several months of Fund operations gave cause for hope of the success of this institution. In January 1948, however, France devalued the franc by nearly 50 per cent (from 119 to 214 francs to the dollar) in spite of objections on the part of the Fund management. Since the Agreements under which the Fund operates require the consent of the Fund to an alteration of the par value of a member's currency of more than 10 per cent, France deliberately violated the agreement entered into when she joined the Fund. This action on the part of France—a leading member of the Fund—was most unfortunate. It renders France liable to expulsion from the use of the Fund and, although no immediate action has been taken (or is likely to be) in that direction, the prestige of the Fund has undoubtedly been injured by this step, and its ability to manage its affairs in the best interests of all members has become more questionable.

The domestic standard.—Although the outlook for a stable international standard based on gold, with orderly readjustments through the Fund when necessary, has been rendered more obscure by the action of France, the problem of the standard in the United States is not difficult and its solution should be clear. The United States has at present what we have termed a provisional gold bullion standard. This country should return to a full gold standard (bullion or coin). At present the Treasury buys gold at \$35 an ounce, but the moneys of the system are not freely convertible into gold, gold being obtainable for artistic and industrial uses or for export only by license from the Treasury. The steps that should be taken to remedy this situation have already been indicated (Chapter 6). The moneys of the system should be convertible into gold at the rate of \$35 an ounce and no strings should be attached regarding the use to which gold so obtained is put.

If the gold coin standard were to be re-established, it would be necessary to re-institute the free and gratuitous coinage of gold, to arrange for the redemption of other moneys in gold coin, and to place no restriction on the melt-

ing down of gold coin for use in the arts or industry, or for export.

There is some difference of opinion on the part of those advocating the return of the United States to a full gold standard on whether a gold bullion or a gold coin standard should be adopted. There are certain advantages to both arrangements, but, in the author's judgment, the differences are relatively unimportant. The really important feature of the gold standard is that there should be a free and unrestricted flow of gold both into and out of the monetary stock at a fixed price, and this end would be attained whether a gold coin or a gold bullion standard were adopted.

Considerable opposition to the gold standard developed in England in the thirties on the ground that it was too restrictive and interfered with the pursuit of a sound credit policy. The United States is confronted with no such difficulty. Gold reserves are more than ample and bid fair to become even larger. Under the circumstances, credit and fiscal policies designed to attain a satisfactory level of production and employment may be practiced under a full gold standard without fear of restrictive effects engendered by an inadequate supply of gold. Domestically, then, a return to the full gold standard by the United States appears desirable on all counts.

Conclusion.—With the foregoing discussion of the problem of the standard, we have completed our survey of monetary and commercial banking principles and practices, with especial emphasis on the situation in the United States. Since certain activities of a financial nature, frequently engaged in by the so-called commercial banks and related institutions, have received little or no attention in preceding chapters, it seems desirable in the final section of the text to turn to a brief consideration of these noncommercial banking activities. The chapters that follow will accordingly be devoted to a discussion of trust functions, investment banking, savings banking, and agricultural credit.

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PART VIII
NON-COMMERCIAL BANKING

CHAPTER 36

TRUST FUNCTIONS

Introduction.—In earlier chapters we have been concerned chiefly with the commercial banking functions of the modern bank. In the chapters that follow, certain functions that are ordinarily performed by banks, but that must be distinguished sharply from commercial banking will be considered. Some of these functions are in the nature of convenience services about which something has been said in an earlier chapter. Services of this sort are largely superfluous, but where merited are performed with the idea of furnishing information and facilities of a sort that will tend to increase the business capacity of the bank's customers, or to increase the amount of its deposits, so that they are in a sense incidental banking services.

Certain other functions, on the other hand, are carried on with a view to making profits directly and not merely as supplementary to a commercial banking business. These functions consist first, of acting as *trustee* or in a *fiduciary* capacity; second, of conducting a *safe deposit* business; third, of assisting in the *distribution of investment securities*; and fourth, of conducting a *savings bank* business.¹ The present chapter is concerned with the first two of these functions, while the third and fourth will be considered in the two following chapters.

The nature of trust functions.—As the name implies, the performance of trust functions involves the control of property by one person, known as the *trustee*, on behalf of another person, known as the *trustor*. The property may be controlled in the interests of the trustor or of some third person. In any event, the one who benefits from the handling

¹ Although the so-called commercial banks do undertake these various functions, they are also performed by separate specialized institutions. We are chiefly concerned with the functions as such, however, rather than the institutions that carry them on.

of the property by the trustee is known as the *beneficiary*. To illustrate, suppose a businessman turns over a definite amount of property, in the form of bonds, mortgages, etc., to the trust department of a bank, to be handled by that department as it sees fit until the businessman's son is ready to go to college, at which time the original property with its accumulations of income is to be liquidated and the funds obtained used to send the son through college. In such an instance, the businessman would be the trustor, the department of the bank the trustee, and the businessman's son the beneficiary.

Scope of the trust department's business.—It is with services of this sort, and a variety of related services, that the trust department has to do. It may act as trustee for an individual or a corporation and the beneficiary may be an individual, an institution, a corporation, or a governmental unit. At times the trust department may act as agent in the performance of certain designated services; at others it may have complete control of the property entrusted to it, acting as trustee in the fullest sense. It is not possible to classify the services of the trust department into mutually exclusive groups, but we shall not depart very far from strict accuracy if we divide its functions into two main classes, *personal trusts* and *corporate trusts*. While certain services may be performed for either a corporation or an individual, it is nevertheless true that the work of the personal division of the trust department is, in the main, of a nature distinct from that of the corporate division.

Personal trusts.—Personal or individual trusts may themselves be subdivided into *court trusts* and *trusts under private agreement*. Court trusts are those obtained by appointment of the courts that have jurisdiction in cases requiring the designation of an executor or trustee. The trust department is responsible to the court in such instances and must account to it for the handling of the property or estate. Trusts under private agreement, on the other hand, are made by voluntary agreement between a living person and the trust department.

Court trusts.—Much of the business received by the trust department under the head of court trusts arises out of the

provisions of wills and may be termed testamentary trust business. The will of a deceased person ordinarily designates an executor of the estate. The will is submitted to the probate (or equivalent) court by the executor where it is probated, the capacity of the maker and the validity of the will being thus tested. If the will is found satisfactory by the court, the executor is then authorized to execute the terms of the will, distributing the property among the heirs as specified in the will after paying all legal claims and taxes. In earlier days it was common practice for the maker of a will to designate an individual as executor. At present, however, there is a growing tendency to name a trust company or trust department as *executor*, especially when the estate is large or when the provisions of the will make the execution of it a complicated affair.

Many times the maker of a will wants his heirs to obtain the benefit of the income from his estate, but does not wish to entrust to them the actual management of the property. In such instances, the maker of the will is likely to designate a trust company as trustee to manage the estate for the benefit of the heirs after having paid all inheritance taxes and debts and distributed any legacies that do not come under the terms of the trust.

While the trust company ordinarily obtains this sort of business by designation of the maker of the will, it is nevertheless possible for an individual executor to renounce his appointment in favor of a trust company. Similarly, when a man dies intestate (without a will), the first of kin has a legal right to administer the estate, but may renounce this right and designate a trust company to act in the capacity of *administrator*. The trust company then pays the necessary taxes and debts and distributes the remainder of the property according to the law applying to intestates.

There are two other common types of court trust. A trust company may be appointed *guardian* of the estates (sometimes even of the persons) of minors or weak-minded persons, or *committee* of the estates of lunatics. In such cases, the persons in question are deemed by the court to be legally incompetent to handle their own affairs, so that the appointment of a guardian or committee becomes necessary.

Voluntary or living trusts.—In the nature of the case, court trusts are bound to bulk large in the business of the personal trust division of the typical trust department or trust company. In recent years, however, the voluntary or living trust has become of increasing importance in the affairs of the personal trust division.

Voluntary trusts are formed by private agreement between the individual and the trust company (the trustor and trustee), and hence may be created for any lawful purpose. They may be revocable or irrevocable, the irrevocable type being desirable when the trustor wishes to place a certain portion of his property beyond his control to assure himself and his family an income in the event of future reverses in his business. The chief difference between a living and a testamentary trust is that the former comes into operation during the lifetime of the trustor and permits him to pass judgment on the desirability of the trust and the efficiency of the trustee before his death.

Although the beneficiaries of a living trust may be individuals or organizations other than the trustor from the time the agreement goes into effect, it more usual for the trustor to designate himself as the beneficiary during the remainder of his life, the benefits to pass to others indicated in the agreement or in his will at the time of his death.

Agency agreements.—When an arrangement is made by which the trust company manages property for the sole benefit of an individual during his lifetime, the property reverting back to the individual's estate at his death, the form of the agreement is that of an agency, not a formal trusteeship. The trust company, acting as agent, may perform any service for the individual, from the mere clipping of coupons and safekeeping of securities to the complete management of all or any part of the individual's property. Such services may obviously be of great value to professional men, persons in ill health, or others who for one reason or another are not suited to the task of managing their property, as well as to the businessman who wishes to devote his entire energies to his business, in which he is expert, leaving the management of his estate in other—and usually more competent—hands.

The following list of services, quoted from Herrick,² gives an idea of the scope of the trust department's work in the voluntary trust field:

- As trustee of specified property to be administered for members of a family, for other dependents or for particular charities.
- As trustee of property to be administered for the creator of the trust.
- As custodian of securities, involving the safekeeping of the securities, collection and remittance of income and attention to all matters which concern the owner.
- In the preparation and filing of income tax returns.
- In the management of real estate, involving entire charge.
- As agent for the collection and remittance of income.
- As agent for the payment of taxes, insurance premiums, etc.
- As trustee for the collection of insurance policies after the death of the assured, the investment of proceeds and the distribution of income, annuities or principal.
- As custodian of wills.
- That of secretarial service.
- As depository for property of any description.
- As agent or attorney in fact for any purpose.
- As escrow agent.
- As assignee or receiver.

Corporate trusts.—The trust company or trust department also serves corporations in a variety of ways. The rapid growth in the importance of the corporate form of business enterprise in the past half century, together with the great increase in trading in corporate securities, has largely increased the corporate trust business of the majority of trust companies. A few of the more important capacities in which the trust company may act in behalf of the corporation will be briefly considered.

Trustee under a corporate mortgage.—A corporation, like an individual, may borrow money on the basis of mortgage security on part or all of the real property of the company. Since the amount to be raised in this fashion is likely to be larger than can be furnished by one party, however, and since the mortgage itself cannot well be divided into numerous parts, the corporation resorts to the sale of bonds, the mortgage against its property being placed with a trust company to be held for the protection of the bondholders. Even when the bonds issued are not secured by a specific mortgage

² Herrick, C., *Trust Departments in Banks and Trust Companies*, p. 15.

on the company's property, a trustee is still necessary to take charge of the indenture or agreement between the company and the bondholders that specifies the rights and duties of the two parties, and, of course, a trust company or trust department is likely to be employed in this capacity. If the agreement provides for a sinking fund for the amortization of the bond issue, the same trust company that acts as trustee will also act in the capacity of depositary and agent for the proper handling of the sinking fund.

Transfer agent for stocks.—Another important service performed by the corporate trust division is that of acting as transfer agent for corporations. Every time one or more shares of stock of a given company change hands a record of the transfer must be made so that the list of the corporation's stockholders may be accurately maintained. With the vast amount of trading that goes on today in the shares of many companies, it is almost essential for these concerns to employ a specialized agency such as a trust company for this purpose. The trust company keeps an accurate record of all changes in ownership in the shares of the corporations for which it is acting, and makes sure that the transferee receives a clear title to the shares he has purchased or obtained. Stock certificates are nonnegotiable instruments and can be transferred only by assignment. The old certificate must be surrendered by the transferor, a new one issued to the transferee, and the property entry made in the stock book, before the transfer is binding. Where the number of transfers made daily is large, the work of a transfer agent is clearly considerable.

Registrar of stocks, bonds, or commercial paper.—It is a rule of the New York Stock Exchange that all certificates of stock of corporations whose stock is listed on that exchange shall be registered for the protection of the shareholders. The chief function of the registrar in this connection is to make certain that the number of shares of stock outstanding as indicated by the registered certificates is never in excess of the number that has been authorized and actually issued. In other words, the registrar acts as a check on the corporation in its issuance of stock certificates. This being the case, it follows that the function of registrar cannot be performed

by the same agency that acts as transfer agent for a corporation. In fact, many corporations maintain their own transfer offices, especially when their stocks are not widely traded in, but even when a trust company is employed as transfer agent by a given corporation, it may not act as registrar of the stock of the same corporation.

The Stock Exchange rule requiring the registration of certificates of stock arose out of certain malpractices of corporation officials in earlier times that resulted in overissues of stock, thus defrauding the bona fide shareholders.

The registration of bonds is not always necessary. The ordinary coupon bond is a negotiable instrument, title passing upon delivery from one person to another, so that no registration is required. Some bonds, however, are registered and, at times, coupon bonds may be registered as to principal. In such instances a trust company is likely to be appointed to act as registrar. Occasionally, also, a trust company may be called upon to act in the same capacity with respect to commercial paper, although the bulk of such paper is not registered.

Depository for various purposes.—The trust company or trust department performs a variety of services for corporations by acting as depository or depository and agent in a number of connections. Among the more important of these services is that of *depository and agent under reorganization agreements or for creditors' committees*. If a corporation fails to pay the interest on its bonds or otherwise vitiates its contract with the bondholders, it will probably prove desirable for the bondholders to take over the immediate control of the business until it can be placed in the hands of a reorganization committee. In order to accomplish this, the bondholders must turn over their bonds to a depository in exchange for deposit certificates. Later, when the business has been reorganized, or an adjustment has been made, the depository and agent calls in the certificates in exchange for new securities that have been issued or for a given proportion of the old securities, as the case may be. The steps toward a reorganization or an adjustment may be instigated by a committee of creditors or bondholders that employs the trust company as depository, or they may be taken directly by

the trust company acting in the capacity of trustee for the bondholders.

Another capacity in which the trust company is frequently called upon to act is that of *depository and agent under escrow agreements*. Webster defines an escrow as "a deed, bond, or other written engagement, delivered to a third person, to be delivered by him to the grantee only upon the performance or fulfillment of some condition." The escrow agent is, of course, the "third person" referred to in the definition. When a trust company acts as escrow agent and depository, the deed, bond, or other engagement is deposited with it and held until the condition specified in the agreement is fulfilled, at which time it is delivered to the proper party. The deposit of the escrow with the trust company places it beyond the control of the grantor, but the grantee does not receive title until he has fulfilled the specified condition.

Other services.—In addition to rendering those services that have just been described, trust companies also act for corporations at times in many or all of the following capacities:³

- As fiscal agent for the payment of coupons, dividends, interest on registered bonds or principal of maturing bonds, etc.
- As depository and agent for the proper handling of sinking funds or other special funds.
- As depository and agent for voting trusts.
- As depository of subscriptions to stock or bond issues.
- As depository of claims in bankrupt estates.
- As manager of underwriting syndicates.
- As liquidating agent.
- As agent for the safekeeping of securities.
- As agent and/or attorney in fact for any purpose.
- As assignee or receiver.
- As investigator for proposed new enterprises or extensions.
- As trustee for foreign corporations.

Overlapping of corporate and personal functions.—From the foregoing description of the work of the personal and corporate divisions of the modern trust department or trust company, it will be observed that the functions of the two divisions are not entirely separate and distinct in every

³ From a list given by Herrick, *op. cit.*, p. 16.

particular. The trust company may act as agent for the safe-keeping of securities, as escrow agent, as assignee or receiver, etc., for both corporations and individuals. For the most part, however, the business of the two divisions is of a sufficiently distinct character to justify the classification here employed.

The community trust.—A relatively new development in the trust field is the community trust.⁴ The object of this form of trust is to provide funds, to be handled ordinarily by a trust company, for the promotion of charitable, educational, and research work for the benefit of the community. The idea is ingenious and commendable in that it practically assures donors that funds given or willed to the trust will be efficiently handled and devoted to desirable uses, an assurance that is otherwise very difficult of attainment. The popularity of the idea is shown by the fact that on February 1, 1925, little more than a decade after the establishment of the first trust of this type, fifty-two community trusts had been established in the United States.⁵

The corporate vs. the personal trustee.—There is evidence of the existence of fiduciary relationship from very early times, but only comparatively recently has the corporate trustee, in the form of a trust company or the trust department of a bank, been available to individuals requiring trust services. In fact, even at the present time, resort is had to individual or personal trustees in many instances. The rapid growth of trust departments and trust companies, however, testifies to the fact that a corporate trustee possesses certain advantages over the individual acting in a fiduciary capacity. The more important of these advantages merit brief consideration.

Permanency.—The corporate fiduciary has perpetual life while the individual has not. Not only may an individual trustee die before he has carried out the terms of the trust, but he may become incapacitated through accident, old age, ill health, weak-mindedness, etc., thus rendering necessary

⁴ The first community trust, as the term is now understood, was the Cleveland Foundation, established on January 2, 1914, by the Cleveland Trust Company. See Herrick, *op. cit.*, p. 289, and all of Chapter XIX for a complete discussion of this form of trust.

⁵ *Ibid.*

the appointment of another trustee. The trust company, on the other hand, is able to assure the trustor of the fulfillment of trusts of the longest duration with a continuity of policy that is impossible when one trustee has to be substituted for another before the terms of the trust agreement have been carried out.

Efficiency.—Seldom, if ever, can an individual trustee be found with the experience and ability to make investments of the same combination of safety and yield as those made by the corporate fiduciary. The trust company has a highly skilled staff of investment specialists whose entire time is devoted to the problem of making investments, and it stands to reason that its collective judgment is almost sure to be superior to that of an individual trustee who, in the usual course of events, is not primarily an investment specialist. Furthermore, to perform satisfactorily the functions of a trustee, legal ability of a high order is necessary. Even if an individual trustee could always be found with unquestioned investment ability, it is not at all likely that he would also possess the legal knowledge essential to the best performance of his functions, while the typical trust company is always adequately supplied in this particular. Altogether, there can be no question but that, by and large, the corporate fiduciary is far superior to the individual on the score of efficiency and ability in the management of the trustor's property.

Probity and constancy.—The honesty of the trust company can be relied upon. It does not embezzle or default. If its employees are, in any instance, dishonest, the loss falls on the trust company and not on the property that is held in trust. The law requires that the assets of the estates held in trust be segregated from the assets of the company, which makes for greater safety, and, in addition, trust assets are protected to a considerable degree by the capital and surplus of the company.⁶ Further, trust companies are not affected by caprice and personal feeling as the individual trustee may

⁶ Herrick states that the records show but one case in the history of American trust companies of trust funds having been lost because of failure of the trust company. *Op. cit.*, p. 19.

be, and are hence in a position to furnish more satisfactory fiduciary service.

Other advantages.—A number of other advantages pertaining to the corporate trustee may be mentioned. It cannot travel and depart from the vicinity, being always accessible at its office or offices during business hours. It has adequate resources to provide facilities for conducting its business in efficient fashion. Finally, its charges are not high. Not only are the money charges themselves reasonable, but the great efficiency with which property is handled ordinarily makes the real cost considerably lower than when an individual trustee is employed. Everything considered, there can be little doubt of superiority of the corporate over the individual trustee in the performance of fiduciary functions.

The development of the corporate trustee.—The inception of the American trust company occurred in April 1822, when the Farmers' Fire Insurance and Loan Company was empowered by the legislature of the State of New York to exercise trust functions.⁷ Other companies were subsequently granted similar powers, but these early companies were chiefly occupied with the business of insurance—a business subsequently taken over by specialized companies—and no really rapid development of the corporate trustee took place until the latter part of the nineteenth and first part of the twentieth century. Indeed, as late as 1875, the Comptroller of the Currency reported but 35 such companies, all of which were located in New York and New England. After 1875 their growth was much more rapid, there being over 500 trust companies reported in 1900 with deposits of over \$2 billion.⁸

Since 1900, the development of trust companies and trust departments had been marked. The Annual Report of the Comptroller of the Currency for 1930 contains data on the condition of 1564 loan and trust companies with aggregate resources of over \$17 billion. These figures, which are for state trust companies only, are too low even for the state

⁷ *Ibid.*, pp. 2-3.

⁸ *Ibid.*

institutions, not all of which report to the Comptroller.' In addition to the state institutions, on June 30, 1930, there were 2472 national banks with authority to administer trusts. Of this number, "1829 banks had established trust departments and were administering 79,912 individual trusts with assets aggregating \$4,473,040,926, and in addition were administering 11,511 corporate trusts and acting as trustees for outstanding note and bond issues aggregating \$11,803,717,370."¹⁰ It is clear from these figures that the growth in resources and popularity of the corporate trustee since the beginning of the century has been truly remarkable.

Trust companies and trust departments.—In the preceding pages of the chapter the terms "trust company" and "trust department" have been used more or less interchangeably. As a matter of fact, although there are many so-called trust companies in the United States, there are few if any of them that do not carry on a savings and commercial banking business as well. Thus the fiduciary functions are carried out by the trust department whether the institution has the words "trust company" included in its title or not.

The encroachment of trust companies upon the banking field has been a natural development. The two sets of functions (trust and banking) can be conveniently performed by the same corporation, the ready availability of a banking department being frequently necessary to the most efficient prosecution of a trust business. With the entry of trust companies into the banking field, the banks have sought—and, for the most part, obtained—legislation permitting them to carry on a trust business if deemed desirable. As a result, the typical banking institution of the present day is equipped to act, in some measure at least, in a fiduciary capacity.

SAFE DEPOSIT BUSINESS

Nature of the business.—The safe deposit department of the typical modern bank performs a relatively simple function. In return for the payment of a specified periodic fee, the bank furnishes vault space for the safekeeping of securities, wills, insurance policies, jewelry, or other valuable per-

⁹ *Ibid.*, p. 4.

¹⁰ *Annual Report of the Comptroller of the Currency 1930*, p. 19.

sonal property. The method used is to rent the customer a safe deposit box that can be opened only by the use of two keys, one of which is in his possession and one in the possession of the bank. When the renter wishes to obtain access to his box, therefore, he must be accompanied by an employee of the bank who has the second key, and the bank must use due precaution to see that no one except the renter, or his duly accredited deputy, shall be permitted access to the box. In other words, the renter of a safe deposit box is given as complete protection as is reasonably possible against the loss of such valuable papers or other property as he may see fit to deposit in this fashion.

The facilities offered by the safe deposit department in the rental of boxes are of most use to those who do not employ the trust department as an agent to manage their estates. The trust department attends to the safekeeping of all bonds, mortgages, etc., under its control, and accordingly the need for a safe deposit box is lessened. Nevertheless, even in such cases, it may be desirable to rent a box for the safekeeping of jewels or other valuables that are not included in the property under the management of the trust department.

Distinction between a safe deposit business and deposit banking.—A sharp distinction must be drawn between a safe deposit business and that of deposit banking. Ownership of the valuables—whether money, jewelry, or securities—that are placed in a safe deposit box does not pass to the bank, but remains with the renter of the box. If a box renter deposits, say, ten gold eagles in his safe deposit box on a certain date, and six months later withdraws them, he will withdraw the identical coins he deposited. During the six months, the coins remained in the box where he had placed them. Suppose, on the other hand, that a customer of the bank deposits \$100 for credit to his account. The ownership of the \$100 passes to the bank, and it may use the money in its business as it sees fit. True, the bank is liable to the depositor in the amount of \$100 and will have to pay this amount to the latter in case he wishes to withdraw it. The bank's liability, however, is confined to the payment of the *equivalent* of the original deposit, not of the *identical*!

funds deposited. The bank's profit from a safe deposit business comes from the rental charged for vault space and protection against loss, while its profit from banking arises out of the use of the funds over which the depositor has given it control.

Since, under a sound monetary system, it is immaterial to a person whether he has one particular unit of money or another, it happens that individuals generally deposit their money, or claims to money, with the banking department, as this procedure is both more convenient and more profitable than keeping it in a safe deposit box. This is not true, however, of most other property, such as mortgages, insurance policies, jewels, etc., and the safe deposit department performs a useful service in affording adequate protection against the loss of such property.

While reference has been made to the safe deposit department throughout the preceding discussion, the safe deposit business may be carried on at times in conjunction with that of the trust or banking departments. Vault space is essential to the conduct of either a banking or a trust business, and it is a relatively simple matter to utilize a part of this space for a safe deposit business, which, while demanding care and accuracy, does not require the services of an expensive staff of specialists.

Other departments.—In addition to the trust and safe deposit departments, some banks have established real estate departments, insurance departments, etc. While such divisions of the business may be profitable in some instances, they are so far removed from banking and financial activities that their operation by banks is not to be recommended. Since, in cases where such departments have been established, it has probably been found necessary to employ experts along these lines in connection with the work of the trust department, the organization of separate departments has doubtless been undertaken because services of the type in question were already being performed extensively by the trust division.

Conclusion.—Until recently, the distribution of investment securities was to a considerable extent in the hands of investment departments of banks or investment affiliates. This business of the banks was sharply curtailed by the re-

strictions of the Banking Act of 1933 and is now carried on almost exclusively by specialized institutions. The importance of security distribution remains unchanged, however it may be carried out, and will form the subject matter of the following chapter.

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CHAPTER 37

INVESTMENT BANKING FUNCTIONS

Introduction.—In describing the development of the American banking system in earlier chapters, it was pointed out that prior to the establishment of the Federal Reserve System there existed a fairly clear-cut institutional specialization in the performance of banking and related functions in this country. That is, the national banks were quite largely commercial banking institutions; the state banks and trust companies, while doing some commercial business, were chiefly concerned with the savings and trust fields; and the investment banking business, in a narrow sense, was performed by investment or bond houses organized on a partnership basis. Even at this time some of the national banks operated bond departments, organized often as separate corporations, and affiliations of national banks with state savings and trust companies were rather common in the cities, but a fairly distinct division of banking institutions nevertheless existed throughout the system as a whole.

With the recent development of departmental banking, a marked change has taken place in this respect. The McFadden Act of February 25, 1927, gave the national banks the legal right to operate bond departments under their own charters and broadened their powers, granted under the Federal Reserve Act, to make real estate loans and engage in a savings business. Many of the national banks have also established trust departments under the provisions of the Federal Reserve Act, as noted in the preceding chapter. The departmental institutions organized under state laws have likewise continued to develop their investment banking functions through the operation of their savings, trust, and bond departments.

In addition to these changes, there occurred, prior to 1933, a marked tendency for the larger departmental banks to enter

the field of investment banking proper through the establishment and operation of affiliated investment companies that perform functions similar to those of the old established partnership houses, such as J. P. Morgan & Co., Halsey, Stuart & Co., etc. Thus, from an institutional point of view, the old division of functions was fast disappearing.

The purpose of the present chapter is to describe briefly the investment banking mechanism of the country, to consider the functions performed by the various investment institutions, and to point out the relation between investment institutions and the deposit banks of the country.

The investment house.—Investment banking proper is carried on by what may be termed investment banking houses. The term "investment house" is used broadly to include all those institutions or departments of institutions that are engaged in handling investment securities directly as merchants—i.e., purchasing them and subsequently selling them to investors. Accordingly, investment affiliates and bond departments of banks and brokerage concerns, as well as the large and small partnership houses of the type already mentioned, are included under this head. Since they all perform the same functions, there is no point in making a distinction between them.

As thus defined, investment houses may be divided roughly into two main classes: wholesale and retail houses. The former group includes a comparatively small number of houses that, although selling directly to investors, are also concerned to a large extent with the purchase of new issues of stocks or bonds from corporations and governmental units, the securities being subsequently marketed both by themselves and by the retail houses. In the organization of the strictly retail house much emphasis is necessarily placed upon the selling end of the business. The sales force is given frequent and careful instruction concerning the details and desirability of each new issue in order that it may be imbued with the knowledge and enthusiasm necessary to the disposal of the securities to investors. In the wholesale house, on the other hand, the purchasing department also looms large in importance and the organization of the business is arranged accordingly.

In addition to the buying and selling departments, the organization of the investment house ordinarily includes a statistical department, a trading department, and an accounting department. The statistical department furnishes information based upon its investigations of the security issues handled that is valuable both to the sales force and to the investor. In the wholesale house the work of this department is also of great value to the purchasing department. The trading department has the task of purchasing in the market those securities that have been sold to investors by the sales force, but that the investment house does not have in its portfolio. Many new securities are also disposed of by the trading department in exchange for other securities already in the hands of investors, and it is the function of the trading department to dispose of stocks or bonds thus acquired in the market, if possible, with a profit to the investment house. The accounting department has charge of the handling of, and accounting for, the transactions of the house.

Enough has been said to indicate that the division of investment banking establishments into wholesale and retail houses is not mutually exclusive. The large retail houses occasionally purchase issues of securities or enter into purchasing syndicates with a group of wholesale houses, while practically all the wholesale houses have more or less extensive selling departments, the investment affiliates of the deposit banks having been especially active in the retail distribution of securities. Nevertheless, in spite of considerable overlapping, the classification is serviceable in indicating the general direction in which the interests of the different investment banking houses lie.

The functions of investment houses.—The functions performed by investment houses may be conveniently grouped under the three heads of *investigation*, *underwriting*, and *distribution*. Generally speaking, the investigation and underwriting of securities issues are undertaken by the wholesale houses while the distribution of the securities to investors is accomplished by both the wholesale and retail establishments.

Investigation.—When a corporation appeals to an investment banking house to purchase a new issue of securities, the

first step taken by the latter, if it is at all interested, is to investigate thoroughly all of the conditions surrounding the issue. If the issue consists of bonds, secured by a mortgage, the property covered by the mortgage must be carefully evaluated by engineers and other experts to make sure that there is a proper margin of protection for the bondholders. Accountants will be employed to see that the corporation's accounts and statements are correct, and the services of an expert lawyer will be required to determine the legal soundness of the issue. In short, everything that can be done will be done to ascertain the desirability of the proposed issue.

The reason for making such a far-reaching and thorough investigation is to protect the credit of the investment house. These institutions depend for their business on the satisfaction of their customers, and the fact that a number of prominent houses protect the market for the issues they finance furnishes an additional incentive to insure the soundness of the issues they handle.

Underwriting.—After an investment house has satisfied itself of the desirability of a given issue of securities, the next step in the procedure is to underwrite the issue. Underwriting has been defined as “the act or process of guaranteeing the sale of an issue of securities by purchase at a stated price from the issuing corporation or governmentality.”¹ It is then necessary for the underwriter to dispose of the securities at a higher price than that which has been guaranteed if the venture is to prove profitable. Although small issues may occasionally be underwritten by a single banking house, the more usual procedure is to form a syndicate composed of a group of investment bankers, thus permitting a distribution of the risk and a diversification of the securities that any given house has to offer to its customers.

In any specific instance, then, the investment house that had discovered and investigated a given issue and has decided to finance it, will request a few other wholesale houses to join with it in underwriting the issue. Each of these houses will assume the liability to dispose of a given proportion of the issue at an agreed-upon price. Such a joint group of underwriters may be termed a purchasing or *underlying*

¹ Munn, G. G., *Encyclopedia of Banking and Finance*, p. 568.

syndicate. When any profits accruing to the syndicate or any losses suffered by it are apportioned among the members in proportion to their participations, regardless of how many bonds any specific member may have disposed of, the syndicate is called an *unlimited liability account*. This is the usual form of underlying syndicate. If, however, the profits or losses of each member are restricted to his own apportionment of securities, the principle on which the syndicate operates is that of *limited liability*. Losses may result when the securities have to be sold at less than the anticipated price, or when it is impossible to sell all or part of them at any reasonable price, so that the unsold portion has to be held until the market for it becomes more favorable.

Ordinarily, the originating house (i.e., the house that discovered and investigated the issue) acts as manager of the underlying syndicate, making payment to the issuing corporation or governmental unit, taking charge of the securities, negotiating loans from banks to carry the securities while they are being sold, etc. Sometimes, however, each member of the syndicate makes payment to the issuer directly for its share of the issue, arranges its own loans, and manages its own share of the securities. The latter method is termed *divided carrying*, as contrasted with the former method, which is known as *undivided carrying*.

Distribution.—In arranging for the distribution of a security issue, the underlying syndicate forms another syndicate, which is variously termed a *selling*, *participating*, or *distributing syndicate*. The membership of this type of syndicate is largely made up of retail houses, trust and savings departments of banks, insurance companies, and other financial institutions. The members agree to take, or assume liability for, a given amount of securities, and the underlying syndicate apportions that part of the issue that its own members do not care to sell in proportion to the amount bid for or on some other designated basis.

Although many of the members of a distributing syndicate are bond houses or bond departments of banks that want the securities to sell to their customers, some of the members—such as trust and savings departments and insurance com-

panies—wish to purchase the bonds for their own accounts. The underlying syndicate, therefore, turns over the securities to the members of the distributing syndicate at a specified price, but allows a selling commission to those members who wish to sell the securities to individual investors. Thus the bond houses obtain compensation for the cost of selling the securities, while the members that buy for their own accounts obtain the bonds at a price below that paid by the individual investor. The underlying syndicate generally profits by this procedure also since it tends to insure a wider and more active reception of the issue than would otherwise occur.

The liability of the members of a distributing syndicate may be either limited or unlimited as in the case of the underlying syndicate. When the number of members is large, however, the limited liability form is apt to be used, although this is not invariably the case. Sometimes, when the market for a particular type of security is active, the distribution of an issue may be most simply accomplished by the organization of a selling group. The members of such a group assume no liability, but merely turn in subscriptions already received from customers to the originating house or syndicate. When the market is less active, on the other hand, the organization of a distributing syndicate is expedient.

Bond departments and investment affiliates.—Having outlined the type of organization and functions of the investment house, let us consider some of the particular questions concerning the operation of bond departments of banks and investment affiliates, since through these instrumentalities the deposit banks participate directly in the investment banking process.

Bond departments.—Many of the larger banks and trust companies in the United States have established bond or investment departments in order to meet more fully the financial needs of their customers. These departments generally correspond rather closely, as regards the nature of their business, to the strictly retail bond house. The National Bank Act, as amended by the act of February 25, 1927, permits national banks to buy and sell investment securities in the form of bonds, notes, and/or debentures of a marketable

nature, and state laws generally permit the purchase and sale to customers of investment securities by banks and/or trust companies.

In conducting a bond department, a bank has this advantage over the independent retail investment house: its own customers are likely to patronize this department in the purchase of investment securities without particular sales stimulation. It is accordingly possible for the bank to obtain business without maintaining an elaborate sales force. By mailing to its customers lists of bonds that the bond department has purchased, with possible recommendations, a response is assured from many customers who have funds to invest and who prefer to deal with their own bank rather than with outsiders. Moreover, since the bank stands to make a profit on the sale of the bonds, there is less tendency for the bankers to discourage the withdrawal of deposits for purposes of investment than there would be if the securities were to be purchased from an independent organization.

The possible danger of operating a bond department, on the other hand, is that the banker will recommend to customers the purchase of his own departments' securities in preference to some other, and perhaps better, investment that the bond department does not have in its portfolio, or that the bank may buy for its own investment account various bonds that have not proved attractive enough to be salable to customers. The latter possibly is not of great significance when the bond department is operated under the charter of the bank, however, as it makes no great difference whether the bank suffers a loss from its own investments or from the operations of its bond department.

Investment affiliates.—Prior to 1933, the affiliated investment company became increasingly popular as a means by which commercial banks might enter the investment banking field. These investment companies were incorporated enterprises that were under the control of the banks organizing them. Three general types of affiliation were used in practice. First, the bank's shareholders had a pro rata interest in the stock of the investment company. This was the type of affiliation that proved most popular. Second, the stock of the affiliated company was owned by the bank. This type was

less usual, probably for the reason that national banks and state banks in various states were not permitted by law to carry an investment of this sort. Third, both the investment company and the bank were controlled by a holding company, or the bank controlled the holding company, which, in turn, had control of the affiliate. This type was found usually in connection with group banking.²

In the majority of instances, investment affiliates supplanted bond departments that were already in operation. The reasons that led to the substitution of the affiliate for the bond department³ were: first, the affiliate was not circumscribed by law as was the bond department in respect to the type of securities it might handle; second, in time of need the investment company could borrow from the bank with which it was affiliated; third, the affiliate could establish branch offices without restriction as to number or location; fourth, the separation of the investment from the general banking business through the operation of a separate investment company resulted in more efficient execution of policies than was often the case when the investment business was in the hands of a bond department; fifth, accounting on a strict merchandising basis was possible in an investment company, but not easy to accomplish in a bond department; and, finally, the establishment of an investment research department, which usually accompanied the organization of an affiliate, provided investment counsel for the bank in connection with its own security purchases for investment account.

Without doubt the operation of investment affiliates offered advantages of the sort noted to the banks controlling them. It was contended that their operation also tended to raise the standards of investment banking by introducing the proverbial conservatism of the commercial banker into the investment field and, because their capital was larger than that of most unincorporated investment houses, by providing more effective underwriting facilities, carrying a more

² This information is obtained from a careful study of investment affiliates, Preston, H. H., and Finlay, A. R., "Investment Affiliates Thrive," *American Bankers Association Journal*, May 1930; pp. 1027 ff.

³ As given by Preston, H. H., and Finlay, A. R., "Era Favors Investment Affiliates," *American Bankers Association Journal*, June 1930; pp. 1153 ff.

diversified portfolio, and avoiding "dumping" of securities on the market in large lots.⁴

To offset these advantages there were possible dangers. The affiliate might be inclined to borrow too heavily from its bank in instances when it had accumulated issues of securities that were not readily absorbed. Again, the bank could buy for its own investment account bonds that the affiliate could not market. Moreover, the trust department of the bank might invest trust funds in securities offered for sale by the affiliate, although the obvious danger of such a practice led to a ruling against it on the part of most of the banks operating investment companies. Finally, as in the case of the bond department, there was the danger that the banker's investment advice to his customers would be biased by a desire to aid in the disposal of the particular securities that the affiliate had for sale, even though something else might better suit the needs of the investor.

Because of the dangers and abuses to which the operation of investment affiliates gave rise, drastic action against such institutions was taken by the Banking Act of 1933. The provisions of this law in this regard will be discussed later in this chapter.

Auxiliary institutions.—Two groups of institutions that assist the processes of investment banking are the stock brokerage houses and the various security exchanges. The chief service performed by these factors is the creation of an active market for investment securities. Shares of stock, being evidences of ownership in the issuing corporation, have no maturity date whatever, while bonds are long-dated evidences of indebtedness, usually running for a considerable number of years. Obviously, investment in such instruments will be greatly stimulated if they may be quickly disposed of in the market without undue sacrifice in case of need. The brokers and stock exchanges, therefore, play a highly significant part in the investment banking process through the maintenance of such markets for investment securities.

Brokerage houses.—The typical stock brokerage house is organized on a partnership basis and its chief function is to buy and sell stocks or bonds for customers on a commission.

⁴ *Ibid.*

In order to do this, one or more of the partners must have seats on (i.e., belong to) one, or perhaps several, stock exchanges, and the bulk of the capital furnished by the partners is invested in these stock exchange memberships and in building and equipment. The partners who hold memberships in the stock exchange are known as "floor members" and their chief business is the actual execution of orders received by the firm, while the other partners attend chiefly to the administration of affairs at the firm's office or offices. The larger firms have branch offices at various points throughout the country, which are connected by leased wire and telephone systems with the main office, usually in New York.

In addition to the actual execution of orders, the brokers arrange for the purchase of stock on margin and for short sales by their customers. In the purchase of stock on margin the customer furnishes only a part, say 25 per cent,⁵ of the purchase price of the stock. The broker buys the stock, borrowing the other 75 per cent of the purchase price from the bank and putting up the entire amount of stock as security for the loan. If the stock goes down in price, the bank may demand additional collateral and the broker in turn will require additional margin from his customer. If the added margin is not forthcoming, the loan will be called and the security sold to repay the bank. Thus the bank is protected by security with a market value in excess of the loan at all times. This is an example of the "brokers' loan" referred to at length in earlier connections.

When a customer wishes to make a short sale, he puts up a margin of cash with the broker and requests the latter to sell for him so many shares of a given stock. Since the customer does not have the stock to sell, the broker borrows it from some other broker who has this particular stock on hand, sells it in the market, and turns the funds received from the sale over to the lending broker for his use. If the stock goes up in price, an amount of cash equal to the increase in the market value of the stock will have to be turned over to the lending broker, and a corresponding added

⁵ The margin actually required varies with different brokers and with conditions on the stock market, running from as low as 20 to as high as 50 per cent. But see reference to Securities Exchange Act later in this chapter.

amount of cash will be demanded from the short seller by his broker in order to maintain his margin of protection. If this is not forthcoming, the short seller's broker will buy the stock in the market, return it to the lending broker, and turn back any of the short seller's original cash margin that may be left after deducting his commission. If the price of the stock goes down, on the other hand, the short seller may order his broker to buy back the borrowed stock at the new lower price and close out the transaction. The speculator who has sold short then makes a profit equal to the difference between the original selling price of the stock and the price at which he covered his short sale, less commissions paid to the broker for handling the transaction.

Another important phase of the work of the brokerage house is performed by its statistical department, which analyzes the market and publishes the results of its studies in a market letter. These market letters are sent out gratis at regular short intervals to the firm's customers to furnish them with information concerning the probable trend of the market.

The New York Stock Exchange.—The most important securities market in the country is the New York Stock Exchange. The exchange is managed by a board of governors selected from its members. The various officials are selected from the board of governors, and several committees, each having charge of a certain phase of the work of the exchange, are also selected from this board. The New York Stock Exchange has 1375 members, the members being the only persons allowed on the trading floor of the exchange.

The main trading floor of the exchange is a large room containing twelve stock posts, at each of which a particular group of stock is traded in. The brokers and floor traders (independent members not connected with a brokerage firm) gather around these posts and make bids and offers that result in competitive purchases and sales. Each sale is recorded and a record of it is sent out over the entire country by means of the Stock Exchange ticker system.

Certain brokers on the exchange specialize in trading in particular securities, others do an odd-lot (less than 100

shares—the trading unit) business by combining small orders, while the floor traders operate independently on their own account. Before a stock can be listed on the exchange, various requirements concerning publicity, number of shares, number of stockholders, etc., must be met by the issuing corporation, in order to give buyers a knowledge of the issue and to insure a market for it at all times.

In these circumstances, the New York Stock Exchange provides a market for leading stocks that is unexcelled. The chief defect at present seems to be the inability to perfect a ticker system that will report every transaction and still keep abreast of the market on days when the turnover is heavy. Otherwise, the exchange provides a close approach to the theoretically perfect market. One section of the exchange is devoted to the purchase and sale of bonds, so that a market is provided for this type of security as well as for stocks.

The fact that the market for stocks, particularly common stocks, is largely speculative in nature is advantageous in some ways and dangerous in others. Among the advantages, one of the most important is the fact that new, unseasoned securities that are not yet suitable for investment may be carried by speculators during the initial period of their existence until they have become "seasoned," and exhibit greater investment attractions. Presumably, also, the operations of speculators in the market should result in the emergence of the economically correct prices for the various securities traded in. The easy access to the market offered to nonprofessional speculators, however, at times encourages public participation to an extent that turns this presumptive advantage into a distinct element of danger. The long bull market, culminating in the crash of October 1929, is illustrative of this condition. Only the operations of highly trained, professional speculators tend to bring out prices that best represent the real values of the securities dealt in.

In addition to the facilities for trading already enumerated, provision is made for borrowing money at time or on call at what is known as the "money desk." Lenders, chiefly the banks acting through brokers, and borrowers are here brought together and the rate is fixed for loans to brokers on the basis of the existing supply of and demand for funds.

A stock clearing corporation has also been formed that, by canceling, so far as possible, each broker's sales and purchases of a given stock, permits settlement of balances to be made only with an accompanying decrease in the need for bank credit to finance transactions.

Other stock exchanges.—There are numbers of other stock exchanges in operation in the United States that follow more or less closely in detail the organization and procedure of the New York Stock Exchange. They are much smaller and less important than the New York Stock Exchange, however, and need not be described. The Curb Market in New York, which lists somewhat more speculative securities than the big exchange, forms a useful supplement to the activities of the latter.

The over-the-counter market.—Some stocks and bonds are not listed on any organized exchange and are dealt in in what is known as the "over-the-counter" market. That is, they are sold over the counter, or by telephone, by investment and brokerage houses, etc. While the market for such securities may be quite active, it is not so close as the market for listed securities. Most bank and insurance stocks and a fairly large number of bond issues are purchased and sold in this way.

Investing institutions.—Considerable investing is undertaken for individuals by institutions, and, with the increasing number of security issues available for investment, the necessity for expert judgment in the selection of sound investments points to an increasing significance of this type of institution. Saving banks, trust companies, investment trusts, and building and loan associations, are the chief classes of institution coming under this head.

Saving banks.—Both strictly saving banks of the mutual or stock type and the savings departments of deposit banks are large holders of investment securities. By the process of pooling the deposits of their customers, they are enabled to utilize the bulk of the deposited funds for investment purposes.

Trust companies.—The description of trust functions in the preceding chapter will have served to show the extent to which trust companies and trust departments in banks act in

the capacity of investors for their clients quite apart from the investment activities of their banking departments. In fact, a considerable part of the business of the trust department consists in investing funds left with it in trust, so that institutions of this type enter the investment field as important buyers of mortgages and securities.

Investment trusts.—This institution is relatively new in the American investment field, but has already attained a significant measure of development and promises to become of constantly increasing importance. An investment trust is defined by Willis and Bogen⁶ as “an institution which combines the funds of numerous investors, operating without legal restriction as to the securities it may purchase.” It differs from the savings bank in that it is not restricted by law in making investments and it obtains its funds from the sale of stock, participation certificates, or bonds instead of through the pooling of deposits. It differs from the holding company, also, in that it buys securities for investment rather than for purposes of control of the companies whose stock is purchased.

In spite of many differences in detail, the institutions grouped under the head of investment trusts may be divided into three groups: the general management trust, the specialized management trust, and the fixed trust. In the first type, the management has complete discretionary power to buy and sell securities at any time, thus being in a position to take advantage of changing market conditions. The specialized management trust confines its activities to the purchase and sale of securities of enterprises operating in a particular field, as public utilities, oils, railroads, etc., but within the field chosen the management has discretionary power to shift the securities in its portfolio at will. The fixed trust provides for the purchase of a specified list of securities that is held intact in spite of changing market conditions, the theory being that such a list offers the advantages of diversification and will appreciate in value in the long run.

The investment trust, when properly managed, is a highly serviceable type of institution. American experience with it

⁶ *Investment Banking*, p. 89.

is comparatively recent and many mistakes have of course been made. As to the future, some legislation pertaining to this sort of investing company seems desirable. While it is probably not advisable to limit the types of securities that may be purchased, the law should require these institutions to purchase securities for investment only, thus eliminating a number of companies that are a cross between investment trusts and regular holding companies. Further, it would be wise to require that profits realized from the appreciation of securities should not be paid out in dividends until a substantial reserve for losses had been built up. Finally, it would seem desirable to require the use of a title that would distinguish such companies from those that are primarily incorporated for purposes of speculation in the stock market.

The rapid growth of the investment trust type of organization in recent years is indicated by the Standard Statistics Company's compilation of new security offerings of all investment trusts, which increased steadily from 44.7 millions of dollars in 1924 to 2951 millions in 1929.⁷ Since the termination of the bull market in 1929, there have been few new issues, but with a return of prosperity a further development is to be expected.

Building and loan associations.—Urban real estate investment needs are financed in part by the issuance of real estate bonds secured by the property that is being financed. Such bonds are usually issued only for the financing of large buildings such as apartment hotels, office buildings, etc. In financing urban home building and other smaller projects, the building and loan association has come to play an important role. In spite of some differences in organization, the method used by these organizations is generally to sell shares of stock on the installment plan, the funds obtained being used to make loans secured by mortgages for the construction of homes or buildings. The dividends are allowed to accumulate to the credit of the stockholders and repayment is made at a definite future date of the amount of stock that has been subscribed and paid for through the installment payments and accumulated dividends. Some associations make

⁷ This includes railroad and bank holding companies and affiliated banking companies, however, which are not run for investment purposes strictly.

loans only to members or stockholders, while others are not so restricted.

Building and loan associations had over \$8 billion in urban real estate loans before the depression. They lost ground heavily during the depression and by 1935 had recovered somewhat, reporting loans of some \$4500 million.⁸

Other institutions.—In addition to the institutions discussed, a large investment demand comes from insurance companies, churches, schools, colleges, etc., and, in recent years, from operating industrial companies that have excess funds not needed in their immediate businesses. These institutions differ from the others, however, in that they are not directly engaged in investing for others, except the life insurance companies, which do act in a sense as investment agencies for certain types of policyholders.

Recent legislation pertaining to investment banking.—Chiefly as a result of the depression, and the various banking difficulties that attended it, several laws pertaining to one form or another of investment banking were passed in 1932 and 1933, as either emergency or reform measures. Of these, the Home Loan Bank Act and the Home Owners' Mortgage Relief Act, the Securities Act, and certain provisions of the Banking Act of 1933 require comment.

The Federal Home Loan Bank Act, July 22, 1932.—This act provided for the establishment of a maximum of twelve mortgage banks, to be known as Federal Home Loan Banks, one in each of a number of districts into which the country was to be divided. Each such bank was to have a capital of at least \$5 million, and the Treasury was authorized to subscribe to such stock up to a total of \$125 million, the funds to be supplied by the Reconstruction Finance Corporation. Member borrowers are required to subscribe to stock in the Home Loan Banks in certain specified proportions, with a minimum of \$1500. When member borrower subscriptions equal the government subscription, one-half of subsequent member borrower subscriptions are to be used to repay the Treasury, the intent being that the Home Loan Banks shall eventually be owned by borrowing members.

Any building and loan association, savings and loan asso-

⁸ Willis, H. P., and Bogen, J. I., *op. cit.*, p. 192.

ciation, cooperative bank, homestead association, insurance company, or savings bank is eligible to become a member borrower, and provision is also made for nonmember borrowers under certain conditions. The Federal Home Loan Banks are authorized to make loans to borrowers on the security of home mortgages up to 60 per cent of the unpaid principal of the mortgage, but not in excess of 40 per cent of the value of the real estate, if the mortgage is being amortized. On home mortgages not subject to amortization, the percentages are 50 and 30, respectively. Mortgages must mature within fifteen years and be secured by a home property having a value of not over \$20,000. Institutions are not eligible to borrow if the total cost to the home owner is more than 8 per cent.

In order to obtain funds in excess of the capital subscriptions, Federal Home Loan Banks are authorized to issue notes, bonds, or debentures against mortgage as security, bearing a rate not in excess of $5\frac{1}{2}$ per cent when issued within a period of seven years from the passage of the act, and 5 per cent thereafter, such obligations to be tax free.

For purposes of supervision and coordination, a Federal Home Loan Bank Board of five members was created by the act, this Board to have general regulatory and supervisory powers over the Home Loan Banks.

In the first year, approximately, of operation, the twelve Federal Home Loan Banks authorized about \$26 million in loans, \$15 million of which was advanced. The government paid in about \$70 million on stock subscriptions and member stockholders about \$30 million.⁹

The Home Owners' Loan Corporation.—The Home Owners' Loan Act of June 13, 1933, which was designed to supplement the work of the Federal Home Loan Bank system, provided for the organization, by the Federal Home Loan Bank Board, of a Home Owners' Loan Corporation to assist in the refunding at a lower rate of interest of home mortgages for the relief of home owners who were in difficulties as a result of the depression. The Corporation, with a capital of \$200 million subscribed and paid for by the

⁹ These figures are from an interesting article by John Hanna, "The Future of Government Banking," *American Bankers Association Journal*, June 1933, p. 47.

government, was authorized to issue \$2 billion of eighteen-year, 4 per cent bonds, interest on the bonds being guaranteed by the government.

Briefly, the procedure involved in the refunding was this: A home owner, whose property is not worth more than \$20,000, and is mortgaged, may refund the mortgage by turning over bonds of the Corporation to the lender in satisfaction of the latter's claim. The home owner may obtain bonds up to \$14,000, or 80 per cent of the value of the property, whichever is smaller, for this purpose as well as for payment in cash of accrued taxes, etc., the entire amount to be refunded into a single mortgage and paid off, including principal and interest, in a period of fifteen years. On this new mortgage the home owner will have to pay interest at 5 per cent, and an extension of three years on the principal may be obtained if necessary. Provision was also made for taking up a limited number of outstanding mortgages in cash, but the bulk of the transactions contemplated involves the exchange of the Corporation's bonds for existing mortgages.

The Home Owners' Loan Act also provided for the establishment of Federal Savings and Loan Associations in localities not now served by similar institutions. The Treasury may subscribe to capital in such associations to the extent of \$100,000 in any single association, this subscription to be paid in proportion to the paying in of money by association members. On December 31, 1940, there were 1441 such associations with loans of \$1,546,270,000.

The Securities Act of 1933.—The Securities Act of 1933, which became law on May 27th, was designed to protect the buyer of securities against fraudulent and misrepresented issues. The essential feature of the law was the requirement that a registration statement shall be filed for every security issued, with certain specified exemptions, it being made unlawful to buy or sell securities, through any means of transportation or communication in interstate commerce, that are not so registered. It was further made unlawful to include in prospectuses, radio sales talks, or other selling devices, any misleading statements, or to omit statements of fact that would cause the information presented to be misleading. This

applied to securities exempt from registration as well as to those registered. Registration statements were required from the sponsors of foreign securities in this country, as well as from domestic issuers. Registration statements for domestic securities required answers to some thirty-two questions, while fourteen questions had to be answered on foreign issues sold in this country. Complete information on all phases of the various issues was thus made available.

The administration of the Securities Act was placed in the hands of the Federal Trade Commission, which was given wide powers for this purpose. It should be noted that the law did not attempt to regulate the quality of the securities issued, but merely to insure the buyer that complete and authentic information regarding any security will be at his disposal. The act also provided for the organization by the President, at his discretion, of a corporation of foreign security holders to represent the interests of holders of defaulted dollar bonds of foreign corporations and governments.

Although the general purpose of this act was entirely commendable, it was so rigorous in certain respects as to deaden investment initiative to a marked degree. It was also doubtful if the administration of the law should have been placed with the Federal Trade Commission.

Provisions of the Banking Act of 1933 relating to investment banking.—Section 20 of the Banking Act of 1933 provided that "after one year from date of enactment of this Act, no member bank shall be affiliated... with any corporation, association, business trust, or other similar organization engaged principally in the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation of stocks, bonds, debentures, notes, or other securities."

The effect of this section was to require commercial banks to relinquish their investment affiliates by June 16, 1934. Although the operation of investment affiliates by deposit banks had distinct advantages, as noted earlier in the chapter, experience appeared to indicate that the dangers involved outweighed the gains and that the drastic action involved in this section of the Banking Act was accordingly justified.

An attempt was also made to prevent private or independently incorporated investment bankers from engaging in a deposit banking business by providing (Sec. 21) that such institutions shall not receive deposits, subject to check or otherwise, after one year from the date of enactment of the law. Other persons, firms, corporations, associations, business trusts, etc., are also prohibited from receiving deposits unless subjected to state or national supervision.

The Securities Exchange Act of 1934.—The Securities Exchange Act of June 6, 1934, provided for the regulation in the public interest of security exchanges in the United States. A Securities and Exchange Commission of five members, appointed by the President with the advice and consent of the Senate, was created. This commission was designed to execute and administer the terms of the act that provided for the registration of security markets as well as of the securities dealt in thereon, and regulated the procedure of the exchanges in numerous particulars. The act also amended the Securities Act of 1933 in certain particulars in order to make it more workable and transferred the administration of the Securities Act to the newly created Securities and Exchange Commission. Both of these changes were much to be desired.

Of interest from the banking point of view, the Securities Exchange Act placed the control of margin requirements in the hands of the Federal Reserve Board, and provided, to begin with, that the amount that the banks might loan was an amount not greater than whichever is higher of—

- (1) 55 per cent of the current market price of the security, or
- (2) 100 per cent of the lowest market price of the security during the preceding thirty-six calendar months, but not more than 75 per cent of the current market price.

The Federal Reserve Board shortly issued a new regulation covering its new powers in this connection. By placing the power to regulate margin requirements with the Federal Reserve Board, the act gave the Board a large measure of control over the expansion of credit for purposes of stock speculation.

Conclusion.—There can be no doubt that the inflation period, ending with the stock market crash in 1929, gave rise

to many evils in the sale and issuance of securities. It is therefore not surprising that steps should have been taken to prevent the recurrence of similar unsatisfactory practices in the future. On the whole, legislation in this direction has been fully justified and has received widespread public approval.

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CHAPTER 38

SAVINGS BANKING

Introduction.—In practically every banking system there are institutions that accept on deposit the small savings of their customers and then lend or invest the bulk of the funds so received. The banking system of the United States contains some of these specialized savings banks, but the bulk of the savings bank business in this country is carried on by the so-called commercial banks, most of which have savings departments. Whether such business is carried on by a specialized institution or by one department of a “department store type” of bank does not affect the fact that savings banking is a specialized type of business, quite distinct from commercial banking. In the present chapter, accordingly, we shall not be especially concerned with the institutions that handle the savings bank business of the country, but rather with the nature of that business. In other words, our approach will be functional rather than institutional.

The savings deposits pool.—In an earlier chapter (Chapter 15) it was pointed out that the commercial deposits pool consists of the temporary surplus funds of business enterprises that are gathered together by the commercial banks and loaned to businessmen in need of short-term accommodation. The lenders (depositors) and borrowers were shown to be of the same general class in the community—business enterprises—those who are at one time chiefly borrowers becoming later chiefly lenders.

Savings deposits.—Regarding savings deposits, the situation is quite different. Such deposits represent accumulations, chiefly of individuals, of a fairly permanent nature. A savings account provides the individual with certain very definite advantages. First, it furnishes him with a safe method of keeping those portions of his income that he desires to set aside to build up a fund for future use either in an emergency

or for investment. Second, a savings account is itself a form of investment since interest is paid on such deposits. Third, the banks, through pooling these deposits, are able to invest them in a diversified list of loans and securities, from which each individual depositor receives the benefit. Fourth, a savings account does not depreciate—as securities may at times—and can always be obtained in full if wanted. It is true that the bank is permitted to require a certain notice of withdrawal, but it is also true that this requirement is almost never enforced, the banks very generally paying such deposits upon demand although not by check.

This description of the services performed by the savings bank will serve to show that it acts as a medium for the investment of funds that are in the nature of long-time surpluses and that are placed with the bank either because the depositor has not acquired a sufficient amount to invest for himself or because he finds the safety and convenience of a savings account better suited to his taste than an individual investment. Such being the case, it is clear that the depositor and borrower are not usually of the same class. This is indicated by the accompanying diagram, which brings out the difference in this respect between the commercial and savings deposit pools. Occasionally, the savings bank may make real estate loans to its own depositors, but for the most part the depositors and borrowers are two distinct classes, the latter being chiefly business enterprises and governmental units and the former, individual savers.

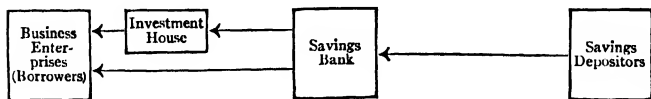


FIG. 19

The investment of savings deposits.—Since savings deposits consist chiefly of long-term investment surpluses that are being accumulated by the depositors, they tend to be relatively stable. The majority of small savers add to their accounts gradually as they are able to do so, with the result that these accounts tend to grow steadily with but few withdrawals. Of course, when a savings account has reached a

certain size, the depositor may withdraw his funds and invest them in stocks or bonds directly, but such withdrawals are infrequent and are usually more than offset by other new deposits. In ordinary times, then, the savings banker has a stable body of funds to lend or invest in as profitable a fashion as is compatible with safety.

Because savings deposits are investment surpluses and are stable in nature, the banker may properly invest them in long-term securities or grant long-term investment loans. The chief form of investment of the savings bank consists of bonds and mortgages, while the loans extended are in large part real estate loans.

Savings bank investments.—In investing savings deposits the banker is concerned, first, with the safety of the investment, and second, with the yield. Unlike the commercial banker, he need give little attention to the marketability or liquidity of his investments. This fact enables the savings banker to invest his funds in bonds or mortgages of a high degree of soundness, but which, because they lack a ready market, yield a substantial rate of return. Many municipal bonds, for example, which are dealt in only on the “over-the-counter” market, would not be satisfactory investments for the demand deposits of the commercial bank because they could not be quickly disposed of without a large sacrifice. Yet, if they are well-protected as regards the payment of interest and the amortization of the principal, they will be thoroughly satisfactory investments from the standpoint of the savings banker.

The case of real estate mortgages is even more in point. Such investments usually have practically no market whatever, it being necessary to await the maturity of the mortgage to receive payment. Obviously, investments of this sort have no place in the portfolio of the commercial bank. The savings banker, on the other hand, may find them eminently satisfactory, since their yield is comparatively high. It is, of course, essential that the banker be fully assured of the mortgagor's ability to pay interest and principal, but he need not be concerned with marketability or liquidity.

To sum up, then, the savings banker may properly invest his deposits in any sound securities with a satisfactory yield

without especial concern about their liquidity. Since he has to pay interest to his depositors, the question of yield is important, for his income must be sufficient to cover his expenses, pay this interest to his depositors, and leave something in the way of profit.

Real estate loans.—Of the direct loans made by savings banks to their customers, the most important class consists of loans on the security of real estate. Formerly, loans of this group were generally of a maturity of from three to five years and were secured by mortgages on the property in question. In recent years, the amortized real estate loan, with a maturity of from ten to twenty years, has come to be the usual type of this form of credit extension. In many ways, the amortized loan is more satisfactory than the straight term loan on real estate, because the principal is reduced regularly by monthly (or other periodic) payments, thus steadily increasing the protection that the mortgage on the property gives the lender.

The proceeds of real estate loans are ordinarily used for urban property development or for long-term agricultural investment. Most of the latter are taken care of by specialized institutions such as the Federal land banks (see Chapter 39), the bulk of the real estate loans of the savings banks and departments of the country being on residential properties.

Loans on the security of real estate are advantageous because they have a relatively high yield and, when properly granted, are reasonably safe. To lend on real estate profitably and safely, the savings banker must possess caution, expert knowledge, and judgment. The proper valuation of real estate is an extremely difficult problem and one that should be entrusted only to the expert. Furthermore, real property values are likely to fluctuate rather widely with periods of business activity and depression, and from locality to locality. Bank loans on real estate, being largely local, are subject to unusual hazards in this connection.

It is reasonably clear that the heavy mortality among the banks of the United States, in the decade 1921–1930, had as one of its major causes the overextension of loans on real estate by the banks that succumbed. This is not so much

the fault of the real estate loan per se as of the improvident extension of this type of credit by the bankers concerned. If the banker has expert knowledge (or advice) on the subject of valuation, sufficient caution to be wary of temporary boom conditions in the local real estate market, and sufficient wisdom to assure himself of the income, or ability to pay, of the borrower, he may safely lend a reasonable proportion of his savings deposits on real estate security. If he does not have these characteristics, he had best leave this type of loan strictly alone.

Other loans.—Although strictly savings banks generally confine their activities to making investments and granting loans on real estate, there is no reason why they should not extend loans to customers on the security of stocks and bonds when the customer desires the loan for investment rather than for speculative purposes. That is, if a customer wishes to borrow from the bank in order to buy securities and will give evidence of his intention of acquiring these securities as an investment by agreeing to reduce his loan periodically out of his income, there is not the slightest objection to such loans from the standpoint of the banker. In extending loans of this sort, the savings banker would be furnishing productive capital to industry, which is his main function in the economic community.

Reserves.—Because of the regularity and slow turnover of real savings deposits, the reserve that must be held against these deposits is comparatively small. The Federal Reserve Act required member banks to maintain reserves equal to but 3 per cent of their time deposits, a large proportion of which are real savings accounts. There may be some question whether or not such a reserve is too small, but, if the savings bank business is soundly conducted, a reserve of 5 per cent should be adequate to meet all ordinary demands for withdrawals.

Savings institutions in the United States.—Savings banking in the United States is carried on by mutual savings banks, stock savings banks, savings departments of commercial banks and trust companies, and United States postal savings banks. We shall consider each of these types of institution briefly in the order named.

Mutual savings banks.—Mutual savings banks are institutions without capital stock, managed by trustees, and operated for the mutual benefit of the depositors. These banks have always been operated with great conservatism in the United States and have been eminently successful. In some states, for example New York, the law designates the type of investments that are legal for these banks, thus restricting their investments to fixed interest-bearing securities of the highest quality. While restrictions of this sort are no doubt desirable as a safeguard, it is probably true that the natural conservatism of the management of these institutions would lead to a sound investment policy in the absence of any legal regulations.

It may be concluded that mutual savings banks have performed an extremely valuable service for the communities in which they exist. Unfortunately, although perhaps not unnaturally, banks of this type are largely concentrated in the East, so that the facilities they offer are not available in all parts of the country. On December 31, 1946, the distribution of mutual savings banks throughout the country was as follows:

New England States	345
Eastern States	173
Middle Western States	12
Pacific States	<u>3</u>
<i>Total</i>	533

Of the 173 mutual savings banks in the eastern states, 131 were in New York. It is accordingly apparent that 476 of these banks, or over 89 per cent of the total, were located in seven states. Massachusetts and New York alone had 321 such banks; roughly 60 per cent of the total for the country.

The following statement of the resources and liabilities of the mutual savings banks of the country on December 31, 1946, will give some indication of the importance of these institutions in the banking system of the United States. The total resources of these banks on that date amounted to approximately 11 per cent of the resources of all of the banks of the country.

SAVINGS BANKING

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ASSETS AND LIABILITIES OF MUTUAL SAVINGS BANKS, DECEMBER 31, 1946
(In thousands of dollars)

<i>ASSETS</i>	
Loans and discounts:	
Commercial and industrial loans (including open market paper) . . .	\$ 493
Loans to farmers	481
Loans for purchasing or carrying securities	485
Real estate loans:	
Secured by farm land (including improvements)	8,771
Secured by residential properties (other than farm)	4,395,869
Secured by other properties	36,557
Other loans to individuals (consumer loans)	2,419
All other loans	70,199
Overdrafts	1
Securities:	
U. S. Government:	
Direct obligations	11,754,028
Guaranteed obligations	3,611
Obligations of States and political subdivisions	63,328
Other bonds, notes, and debentures	1,156,510
Currency and coin	109,201
Balances with other banks, including reserve balances and cash items in process of collection	707,195
Bank premises owned, furniture, and fixtures	92,438
Real estate owned other than bank premises	13,328
Investments indirectly representing bank premises or other real estate	5,231
Interest, commissions, rent, and other income accrued but not collected	38,278
Other assets	26,587
Total assets	\$18,665,000
<i>LIABILITIES</i>	
Demand deposits:	
Individuals, partnerships, and corporations	10,471
U. S. Government	2,407
States and political subdivisions	634
Banks in the United States	54
Certified and cashiers' checks, etc.	2,178
Time deposits:	
Individuals, partnerships, and corporations	16,817,268
States and political subdivisions	1,563
Banks in the United States	622
Bills payable, rediscounts, and other liabilities for borrowed money	98
Mortgages or other liens on bank premises or on other real estate	138
Interest, discount, rent, and other income collected but not earned	1,141
Interest, taxes, and other expenses accrued and unpaid	12,590
Other liabilities	32,406
Total liabilities	\$16,881,570
<i>CAPITAL ACCOUNTS</i>	
Capital notes and debentures	4,900
Surplus	1,211,287
Undivided profits	500,789
Reserves and retirement account for capital notes and debentures	66,454
Total capital accounts	\$ 1,783,430
Total liabilities and capital accounts	\$18,665,000

Stock savings banks.—Specialized savings institutions issuing capital stock, and managed by directors elected by the stockholders, are in operation in some parts of the country. Until 1935, separate reports of condition of stock savings banks were published by the Comptroller of the Currency. The fact that these banks are of small importance compared with mutual savings banks and that their business does not differ materially from that of the so-called state commercial banks has led the Comptroller to include this report (since 1936) in the combined report for state commercial banks. The geographical distribution of stock savings banks on June 29, 1935, was as follows:

Eastern States	9
Southern States	2
Middle Western States	309
Western States	2
Pacific States	19
<i>Total</i>	341

Of the 309 such banks in the Middle Western States, 306, or 90 per cent of the total for the country, were located in Iowa. Total assets and liabilities for this class of bank in 1935 amounted to \$919,242,000. They are probably of even less importance today and need no further consideration.

Savings departments of commercial banks.—In most sections of the country, where neither mutual nor stock savings banks have been established, the bulk of the savings deposits is held by the savings departments of commercial banks. These banks may be classified into three groups: national banks, state commercial banks (including trust companies and stock savings banks), and private banks. The distribution of savings deposits among these groups at the close of 1946 was as follows:¹

National banks	\$18,581,081,000
State commercial banks	16,020,747,000
Private banks	23,728,000
Mutual savings banks	16,819,453,000

¹ The following data, as well as the figures contained in the statement of condition of mutual savings banks, are from the *Annual Report of the Comptroller of the Currency*, 1946.

Mutual savings bank deposits are included for purposes of comparison. It will be observed that, at the end of 1946, banks other than mutual savings banks held about two-thirds of the savings and time deposits of the country.

Postal savings banks.—The United States Postal Savings System is operated in connection with local post offices throughout the country under the supervision of the third assistant postmaster general. Savings will be accepted at designated post offices in amounts from \$1.00 up, but no more than \$100 will be accepted in any one month from a given depositor, and single accounts are limited in size to \$2500. Postal savings deposits still pay interest at the rate of 2 per cent, a higher rate than many banks are paying on savings deposits.

When the system was established in 1910, the problem arose of how the deposits received by the post offices should be invested. Common practice on other countries having similar systems was to invest deposits in government bonds, but this was precluded in the United States at the time by the lack of available bonds other than those used to secure national bank notes. Moreover, the local banks objected to the removal of the funds from the community. The law solved the problem by providing that the bulk of the postal savings deposits should be deposited in local banks. An amount equal to 5 per cent of the deposits, however, has to be held in lawful money by the Treasury, and some investments in government securities are provided for.

For many years, the chief advantage of the postal savings system was to furnish facilities for saving to immigrants who distrusted the banks. It also permitted the receipt of savings at post offices in communities that were too small to support a bank. On December 31, 1946, postal savings deposits in all active banks totaled \$5,586,000, but actual postal savings were much greater than this as the postal savings system now holds large amounts of investments.

Notice on time deposits.—One problem that the savings bank management has to face is the question of notice on time deposits. This problem was brought to the forefront during the depression when withdrawals of savings deposits were at times so heavy as to cause bankers acute embarrassment if

not actual failure. The Federal Reserve Act defines time deposits as "all deposits payable after thirty days, all savings accounts and certificates of deposit which are subject to not less than thirty days' notice before payment, and all postal savings deposits." Accordingly, member banks are permitted to require thirty days' notice of withdrawal of savings accounts. State laws likewise usually provide for a thirty-day withdrawal notice, although in some cases the period designated is sixty days.

Although bankers have thus had the right to require notice of withdrawal of savings deposits, they have ordinarily made no pretense of exerting this right in normally prosperous times. Generally speaking, savings depositors could withdraw their funds on demand at any time. During the depression, on the other hand, a good many banks, being hard pressed by heavy withdrawals by depositors, resorted to their legal right to require notice in order to give them time to liquidate some of their assets and acquire the necessary cash.

Unfortunately, when the withdrawal notice requirement was thus put into effect, it merely augmented the fear of the depositors and caused many, who might otherwise not have withdrawn their deposits, to give notice. Requiring notice seemed to them a sign of weakness and made them want to draw out their own deposits.

It is apparent from the experience of the depression that a notice requirement, to be of any service to bankers, must be effective at all times, good and bad. Otherwise, putting the requirement into effect merely heightens the alarm of depositors and fails entirely to give the banker the protection that such requirements are supposed to afford. The Banking Act of 1933 provided that "no member bank shall pay any time deposit before its maturity, or waive any requirement of notice before payment of any savings deposit except as to all savings deposits having the same requirement." This merely prevents the banks from discriminating among depositors, but does not prevent them from waiving requirement of notice to all depositors of a given class. As a matter of fact, since the settlement of the banking crisis, most of the banks have returned to the old practice of paying savings depositors on demand.

Essential legislation.—In order to strengthen the savings institutions of the United States and to increase their soundness, certain reform legislation is much needed. Three changes suggest themselves as desirable in this connection. They are the enforcement of notice requirements, the restriction of savings bank assets, and the segregation of the assets and business of savings departments in commercial banks and trust companies.

Enforced notice requirements.—The reason for requiring an enforcement of withdrawal notices at all times has been noted above and need not be repeated. It would also be wise to increase the length of the notice period to sixty or even to ninety days. This would give the banker ample time to obtain funds to meet demands of depositors, even when withdrawals were substantial, and, with the notice requirement always in effect, there would be no alarm on the part of other depositors because of heavy withdrawals by some.

If it is maintained that this would work hardship on the depositors, it must be remembered that they derive many advantages from their savings deposits and cannot hope to have everything. If they expect to receive interest on their deposits and to be able to obtain cash for them with no depreciation, they should be willing to forego the convenience of withdrawal on demand. If cash were vitally needed at once in any given instance, it would be possible for the depositor to borrow on the security of his savings deposit during the notice period.

The savings banker of necessity must invest a large part of his funds in slow securities or loans to earn the necessary return. It is in his interest and that of the depositor as well that he be protected against large immediate demands for cash which, in the very nature of the case, he cannot meet without embarrassment and loss.

Restriction of assets.—It has been noted that in some states savings banks are restricted by law on the type and grade of security in which they may invest depositors' funds. Such restrictions should also be included in the Federal Reserve Act, as applied to member banks. These institutions held nearly \$28 billion of time deposits in June 1947, which is a substantial proportion of the savings accounts of the

country. It is essential that the depositors owning these accounts be protected by the assurance of a sound investment policy on the part of the banks' managements.

Segregation of assets and business.—Hand in hand with the restriction of investments should go the segregation of the assets, books, and business generally of the savings departments of departmental banks. Segregation of this sort is required of the state banks of California and some other states, but is not required of national banks or of state member banks in many states. National banks may invest or lend time deposits and demand deposits indiscriminately in a variety of ways. The analysis of savings banking at the beginning of the chapter indicates that it is a specialized type of business, quite distinct from commercial banking. Although there is no objection to having savings and commercial banking carried on under the same roof for the convenience of depositors, there is very grave objection to mixing the two types of business. If commercial banks are to be permitted to carry on a savings business, that business should be strictly segregated and carried on under an officer who is capable and experienced in savings bank work.

Conclusion.—That savings banks and savings departments, with their many billions of dollars of savings deposits, are important factors in the accumulation of capital goes without saying. They are also socially of vast importance, since they stimulate thrift and add to the solidarity of the great middle class. It is clear, therefore, that their proper operation in the interest of depositors is highly significant. These institutions should be so managed and regulated as to prevent losses to depositors that would discourage saving and cause economic and social injury.

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CHAPTER 39

AGRICULTURAL CREDIT

Introduction.—The problem of providing credit for agriculture is one that has come to the fore largely since the beginning of the present century. Before then, the credit needs of the farmer were cared for chiefly by local banks, merchants, and dealers. The peculiarities of agricultural credit, however, have made necessary the establishment of special types of institutions to care for the needs of the farmer. In order to understand the significance of the machinery that has been provided for this purpose, it will be advisable first to consider the nature of agricultural credit, after which a discussion of existing arrangements will be in order.¹

Characteristics of agricultural credit.—There are a number of characteristics more or less peculiar to agriculture that affect the ability of the farmer to obtain credit on the usual terms. Among the most significant of these are first, the relatively small individual producing unit and, second, the rather close interrelation of family and business affairs. The fact that the farms of the country are, for the most part, run as small individual proprietorships means that the regular investment market is closed to the farmer. If he is to borrow for fixed capital purposes, he must furnish nearly half of the capital himself, being denied the opportunity of selling stock or other securities in the investment market. Moreover, the absence of the corporate form of organization limits the sources of his credit and places him in a poor bargaining position.

The close connection between family and business affairs on the typical farm makes the credit position of the farmer

¹ The following paragraphs on the characteristics of agricultural credit are based mainly on Professor John D. Black's excellent article on this subject in the *Encyclopedia of the Social Sciences*, Vol. 1, pp. 529-34.

dependent in part on the standard of living of his family, its size, his plans for the education of the children, etc., as these factors affect his ability to raise capital. The condition in question also makes it difficult to determine whether loans made to the farmer are for productive or consumptive purposes, since the processes of production and consumption are often closely bound together.

Another factor of importance is the risk involved in agricultural production. Actual production is subject to the hazards of the weather and other natural forces, while the value of farm land is easily affected by speculative factors. The inelastic demand for many agricultural products further complicates the situation, for an exceptionally heavy crop, by forcing prices down to unremunerative levels, may weaken the farmer's credit position as much as a partial or complete crop failure.

Types of agricultural credit.—With these points in mind, attention may be directed to the different types or classes of agricultural credit. In general, these classes are three in number: short-term credit, intermediate credit, and long-term or investment credit. The short-term is represented by loans running from one to six months, intermediate credit by loans of a maturity of from nine months to three years, and long-term investment credit by loans extending over five or more years.

Short-term credit may, of course, be properly extended by the ordinary commercial bank. Agricultural production is characterized, however, by both a high ratio of fixed to working capital and a sluggish turnover of working capital, so that the bulk of the credit needed does not fall into the short-term class. Some types of seed loans, feed loans for livestock to go into feed lots in the fall or into pastures in the spring, some loans on milk crops in market areas, loans on stored produce if amply collateralized, and loans to procure a balanced feeding ration for livestock come under this head. Fertilizer loans and loans to pay wages, on the other hand, may not be entirely self-liquidating in a single season.²

The credit needs commonly placed in the intermediate class are the following: farm buildings, land improvements such as clearing, draining

² *Ibid.*, p. 532.

and liming, fencing, farm machinery, work stock, breeding stock, milk cows, and orchards and small fruit stock. Many of these, such as farm buildings, land drainage and orchard stock, especially, are not liquidating within the accepted period of an intermediate type of loan; and in practise they are often covered by regular real estate mortgages running usually for five years. Farmers frequently expect, however, to be able to repay loans for such purposes within two or three years out of the regular income of the farm, and hence would prefer a shorter instrument than a regular real estate mortgage. Also, many such loans are too small to make a regular real estate mortgage desirable. In many cases the farm already has a mortgage upon it which it may not be possible to enlarge or to supplement with a second mortgage. In practise in the United States farmers are often able to borrow the funds for such purposes at their local banks on notes which they keep on renewing until they are all paid. But this arrangement works badly in a period of credit stringency, such as that following the World War, when a large volume of "frozen credits" is produced. Loans for breeding stock, milk cows, work stock, farm machinery, and small fruit come much nearer to liquidating within the accepted period of intermediate credit.³

The most potent demand for loans for agricultural purposes is that for long-term loans to be used in the purchase of land or for other fixed capital purpose. Investment borrowing of this sort is done on the basis of mortgage security, the loan being repaid either in installments or in lump sum at maturity. Whichever method of repayment is used, the funds devoted to this purpose must be accumulated out of the profits of the farm over the period for which the credit extends.

Early absence of investment borrowing.—During a large portion of the nineteenth century American farmers did not feel the lack of investment credit facilities, as their chief fixed investment—land—was available either gratis or at low cost in many sections of the country. It was thus possible for them to finance the expansion of their operations directly from their own savings, or, in the case of free government land, to obtain the desired acreage by settling on and working it.

As time went on and the population increased, agricultural land naturally became more valuable and it became more difficult for the individual farmer to expand his holdings without resort to borrowing. Most of his short-term and

³ *Ibid.*

intermediate credit needs could be satisfied by resort to local bankers, merchants, cattle loan companies, etc., but long-term loans running more than five years were obtainable in the main only from individuals or insurance companies.

The establishment of special farm loan machinery.—After the turn of the century, the necessity for some sort of special machinery to care for the credit needs of agriculture became increasingly apparent as the years passed. The lack of facilities for serving the farmer in this respect not only handicapped the individual farmer, but endangered the presumably commercial banks as well since the latter acquired nonliquid loans, disguised as short-term loans but indefinitely renewable, in an effort to meet the credit requirements of their agricultural customers.

Belated steps were finally taken to remedy the difficulty. The Federal Farm Loan Act of July 17, 1916, provided for the establishment of Federal land banks and joint stock land banks for the purpose of furnishing investment credit to farmers. This was followed, in 1923, by the Agricultural Credits Act, which provided for the establishment of Federal intermediate credit banks, which, as their name indicates, were to care for the intermediate credit needs of agriculture. With the nature and operations of these institutions organized under these laws the following sections of the chapter will be concerned.

FEDERAL LAND BANKS

Organization and nature.—Under the act of July 17, 1916, provision was made for the organization of twelve Federal land banks, one to be located in each of twelve districts into which the country was to be divided. The districts were to be apportioned with due regard to the farm loan needs of the country, but no district was to contain the fractional part of a state. The Federal land banks were to be under the supervision of a Federal Farm Loan Bureau, to be located in the Treasury Department at Washington, and this bureau was placed under the general supervision of a Federal Farm Loan Board of seven members consisting of the Secretary of the Treasury and six members appointed by the President of the United States. Federal land banks have

been established under the terms of the act at Springfield, Baltimore, Columbia, Louisville, New Orleans, St. Louis, St. Paul, Omaha, Wichita, Houston, Berkeley, and Spokane.

Under the original act, the Federal land banks were organized upon the cooperative plan, each bank making loans in its district only through the medium of national farm loan associations, which were local corporations chartered by the Federal Farm Loan Board. Most of the Federal land bank loans are still made through national farm loan associations (now chartered by the Farm Credit Administration), but the law, as amended, permits direct loans to borrowing farmers under certain conditions. Loans are made on the security of first mortgages on farm land and run from five to forty years. The mortgages obtained as security plus the promissory notes of the borrowers are then used by the Federal land banks as collateral to secure their own bonds, which are sold in the investment market. Borrowing national farm loan associations, or individual borrowers, must subscribe to capital stock of the Federal land bank of their district in an amount equal to 5 per cent of the sums borrowed. When the loan is made through a national farm loan association, the farmer-members of the association subscribe to an equal amount of stock, thus furnishing the association with the funds to subscribe to stock in the Federal land bank.

The capital of each Federal land bank was originally fixed at a minimum of \$750,000. This amount was subscribed by the Treasury in the first instance, the funds later obtained being stock subscriptions of national farm loan associations being used to repay the Treasury. This original Treasury subscription has all been repaid, but the government has advanced added capital in substantial amounts. On June 30, 1946, the government owned \$39,957,850 of Federal land bank capital stock, as compared with approximately \$65,790,000 owned by farm loan associations and direct borrowers. Substantially a year later the government was repaid in full and, since June 26, 1947, has held no proprietary interest in these banks.

Making a Federal land bank loan.—To illustrate the operation of the system, a typical loan transaction will be considered. Suppose Smith, a farmer, wishes to borrow \$1000

from the Federal land bank of his district. His first step will be to make application to the secretary-treasurer of the nearest national farm loan association operating in his vicinity. These associations are composed of ten or more individual borrowers and all business with the Federal land bank is conducted through them. Each such association, in addition to a secretary-treasurer, has a president, a vice president, an executive committee of three members, and a board of directors of five members elected from the membership.

Upon receipt of Smith's application, an investigation will be made to insure that the loan desired may be granted by the Federal land bank under the terms of the act. To be eligible, the applicant must agree to give as security a first mortgage on his farm land and he must actually be engaged in, or be about to become engaged in, the cultivation of the mortgaged property. The application must also state the use or uses to which he intends to put the borrowed funds. Under the law loans may be made: (*a*) to provide for the purchase of land for an agricultural purpose; (*b*) to provide for the purchase of fertilizers, equipment, or livestock; (*c*) to provide for buildings and permanent improvements; and (*d*) to repay indebtedness incurred for any of these purposes prior to January 1, 1922.

If the use that Smith wishes to make of the borrowed fund falls under one or more of these heads, the next step will be to appraise the property in order to make sure that the loan will be properly secured. Under the terms of the Federal Farm Loan Act no loan may be for more than \$25,000 nor less than \$100, and no loan may be made to exceed 50 per cent of the appraised value of the land mortgaged and 20 per cent of the value of permanent, insured improvements thereon. Since the amount of Smith's application falls within the limits fixed by the law, the only question is whether or not the value of the mortgaged property is sufficient to permit the loan.

The appraisal of the property is undertaken by the loan committee or appointed investigator of the national farm loan association. The investigation is exhaustive, including an inquiry into the character and solvency of the applicant as

well as a valuation of his property. If a favorable report is returned by the loan committee or investigator the loan is recommended to the directors who may then recommend it in turn to the Federal land bank tendering the endorsement of the local association thereto. In some cases an independent valuation is made by an appraiser appointed by the Federal Farm Loan Board and assigned to the Federal land bank. If both the farm loan association and the board's appraiser recommend the loan, it will without doubt be granted by the Federal land bank, but the bank can lend no more than the amount recommended by the appraiser or the farm loan association, whichever is lower.

Assuming the application to have been granted, Smith must then subscribe to stock in the local farm loan association in the amount of \$50, or 5 per cent of his loan. The association in turn subscribes to stock in the Federal land bank in like amount. The amount of the loan, \$1000, is then turned over to the secretary-treasurer of the association in return for Smith's endorsed note and the mortgage on his property, and is then paid to Smith by this officer.

Repayment of loan.—Loans are made by the Federal land banks on the amortization principle. That is, the borrower makes payment in periodic—usually semiannual—installments, each installment constituting the payment of interest due and a reduction of principal. Table 52 illustrates the method of loan repayment on this basis. The method is advantageous to the farmer since it permits him to repay his indebtedness in small semiannual installments without the necessity of accumulating the principal sum over the entire life of the loan.

Federal land bank bonds.—The funds that the Federal land banks lend to farmers are furnished only in small part by their paid-in capital. For the most part, these funds are obtained from the sale of bonds secured by the mortgages on the property of borrowers plus the borrowers' notes endorsed by the national farm loan associations. Federal land bank bonds are thus secured by a diversified list of mortgages on property that has been appraised at twice the amount of the loan. Moreover, the bonds of each bank are the joint

TABLE 52

THE FEDERAL LAND BANK LOAN

How 68 semi-annual installments of \$32.50 and a final payment of \$32.43 will retire a loan of \$1000 bearing 5½ per cent interest.

Payment No.	Interest	Principal	Balance	Payment No.	Interest	Principal	Balance
1	\$27.50	\$5.00	\$995.00	36	\$19.58	\$12.92	\$699.02
2	27.36	5.14	989.86	37	19.22	13.28	685.74
3	27.22	5.28	984.58	38	18.86	13.64	672.10
4	27.08	5.42	979.16	39	18.48	14.02	658.08
5	26.93	5.57	973.59	40	18.10	14.40	643.68
6	26.77	5.73	967.86	41	17.70	14.80	628.88
7	26.62	5.88	961.98	42	17.29	15.21	613.67
8	26.45	6.05	955.93	43	16.88	15.62	598.05
9	26.29	6.21	949.72	44	16.45	16.05	582.00
10	26.12	6.38	943.34	45	16.00	16.50	565.50
11	25.94	6.56	936.78	46	15.55	16.95	548.55
12	25.76	6.74	930.04	47	15.08	17.42	531.13
13	25.58	6.92	923.12	48	14.61	17.89	513.24
14	25.39	7.11	916.01	49	14.11	18.39	494.85
15	25.19	7.31	908.70	50	13.61	18.89	475.96
16	24.99	7.51	901.19	51	13.09	19.41	456.55
17	24.78	7.72	893.47	52	12.55	19.95	436.60
18	24.57	7.93	885.54	53	12.01	20.49	416.12
19	24.35	8.15	877.39	54	11.44	21.06	395.05
20	24.13	8.37	869.02	55	10.86	21.64	373.41
21	23.90	8.60	860.42	56	10.27	22.23	351.18
22	23.66	8.84	851.58	57	9.66	22.84	328.34
23	23.42	9.08	842.50	58	9.03	23.47	304.87
24	23.17	9.33	833.17	59	8.38	24.12	280.75
25	22.91	9.59	823.58	60	7.72	24.78	255.97
26	22.65	9.85	813.73	61	7.04	25.46	230.51
27	22.38	10.12	803.61	62	6.34	26.16	204.35
28	22.10	10.40	793.21	63	5.62	26.88	177.47
29	21.81	10.69	782.52	64	4.88	27.62	149.85
30	21.52	10.98	771.54	65	4.12	28.38	121.47
31	21.22	11.28	760.26	66	3.34	29.16	92.31
32	20.91	11.59	748.67	67	2.54	29.96	62.35
33	20.59	11.91	736.76	68	1.71	30.79	31.56
34	20.26	12.24	724.52	69	.87	31.56	
35	19.92	12.58	711.94				

Source: *The Federal Land Bank Loan*, Circular No. 17. (Federal Farm Land Bureau).

obligations of all the Federal land banks, which adds to their security. They are also tax-exempt and hence command a good price in the investment market.

Advantages of the system.—The chief advantage of the Federal land banks to the farmer is that they have enabled him to obtain borrowed funds at lower cost than formerly by giving him access to the investment market for high-grade bonds. In view of the desirability of Federal land bank bonds as a safe investment, together with their tax-exemption feature, they can be sold in the market at low rates of interest, and since the Federal land banks are not permitted by law to charge more than 1 per cent above the rate of interest borne by the last preceding issue of bonds, the farmer benefits accordingly. Moreover, since the land banks and farm loan associations are owned by the borrowers, any profits that may be made over and above expenses redound to the advantage of the borrowing farmers.

It is true that the farmer still has to furnish one-half the capital he needs before he can borrow from the Federal land banks. This is, however, no criticism of these institutions, but merely an unfortunate result of the small, individual organization of farming units mentioned in earlier pages of the chapter. Were the Federal land banks to be any more lenient than they now are in granting loans, the rating of their bonds would go down and the advantages of lower cost and a good investment market would be lost to the farmer, to say nothing of the possibility of failure that the land banks would face if they did not assume due precautions in granting loans.

Joint stock land banks.—The Federal Farm Loan Act also provided for the establishment of privately-owned and privately-operated joint stock land banks of the profit-making type. These institutions were to be under the supervision of the Federal Farm Loan Board and were to operate under federal charters with a minimum subscribed capital of \$250,000, one-half of which had to be paid in before beginning business.

Under these provisions of the act, eighty-four joint stock land banks were chartered. In accordance with the provisions

of the Emergency Farm Mortgage Act of 1933, however, which provided for the orderly liquidation of the then existing joint stock land banks, these banks are now being liquidated. On June 30, 1946, only seven of the joint stock land banks chartered under provisions of the Federal Farm Loan Act prior to 1933 had not completed liquidation. Four of these seven were in voluntary liquidation and one was in receivership.

Prior to 1933, the joint stock land banks made loans on the security of farm mortgages for the same duration and under the same conditions as those made by the Federal land banks. They also obtained funds by issuing bonds secured by the mortgages in their possession, but these bonds were the liability of the issuing bank only. A double liability was imposed on joint stock land bank stockholders. Like the Federal land banks, the joint stock land banks might not charge interest at a rate more than 1 per cent above the interest rate on the last series of bonds issued. Expenses and profits accordingly had to be covered by this difference. Unlike the Federal land banks, the joint stock land banks could lend directly to individual borrowers.

Although many of the joint stock land banks were soundly operated and worked to the advantage of the farmer, the desirability of having a second set of institutions performing a service identical with that afforded by the Federal land banks was questionable. The provision of the act of May 12, 1933, which required the liquidation of the joint stock land banks was accordingly well founded.

FEDERAL INTERMEDIATE CREDIT BANKS

Organization and functions.—The Agricultural Credits Act of March 4, 1923, provided for the establishment of twelve Federal intermediate credit banks, their location and management to be identical with that of the Federal land banks. Each Federal intermediate credit bank was to have a subscribed capital of \$5 million, the entire amount of which was to be subscribed by the United States Government. In 1934, under authority of the Federal Farm Mortgage Corporation Act, the Governor of the Farm Credit Administration paid in \$10 million added capital and \$30 million

surplus. This act also gave the Governor of the Farm Credit Administration the right to increase or decrease the capital and paid-in surplus of the individual Federal intermediate credit banks in accordance with the credit needs of the different districts.

Federal intermediate credit banks were originally authorized to make loans to, or to rediscount paper for, cooperative marketing associations, state banks, trust companies, savings institutions, national banks, agricultural credit corporations, and incorporated livestock loan companies. Such loans or discounts might have a maturity of from nine months to three years. Thus the banks were to deal with cooperatives and financial institutions, not with individuals directly. Since 1933, the Federal intermediate credit banks have also made loans to, or rediscounted paper for, production credit associations and banks for cooperatives, as explained later in the chapter.

Source of funds.—The intermediate credit banks derive their funds in part from their paid-in capital and surplus and in part from the sale of debentures. These debentures have maturities ranging up to five years and are secured by collateral composed of cash or obligations discounted or purchased or representing loans made under the provisions of the act. Debentures may not be issued in an amount greater than ten times the paid-in capital and surplus of the issuing bank. They are joint obligations of all the intermediate credit banks and are exempt from taxation. Being ordinarily issued with maturities of from three to twelve months, they form a highly satisfactory medium-term investment.

Interest charges.—The rate of interest or discount charged by the intermediate credit banks may not exceed by more than 1 per cent the rate borne on the last preceding issue of debentures. Financial institutions rediscounting with these banks may not charge their customers a rate that exceeds the rate charged by the intermediate credit banks by more than 3 per cent.

National agricultural credit corporations.—The act of 1923 also provided for the organization under national charter of privately owned and operated national agricultural credit corporations to deal directly with the public or

with other financial institutions. Few corporations were ever organized under this provision, which was of no practical significance.

RECENT DEVELOPMENTS

Agriculture in the depression.—Although certain branches of agriculture had been chronic sufferers from depressed conditions much of the time since 1920, the major business recession, beginning in 1929, enhanced the difficulties of the farmer. Under these circumstances, the powerful political influence of the agricultural interests in Congress was evidenced by the insistence on doing something for the farmer. As a result several enactments, some desirable or essential, others not, were placed on the statute books. The majority of these measures contained provisions dealing wholly or in part with the extension of credit to farmers, and it is with those aspects of recent agricultural legislation that we are here concerned.

The Federal Farm Board.—In order to fulfill the Republican Party's promise of agricultural relief, a Federal Farm Board of nine members was created in 1929. A revolving fund of \$500,000,000 was made available to the Board by Congress. The Board had wide lending powers. Loans were authorized (1) to agricultural cooperative associations for both organization and marketing purposes, (2) to insure the maintenance of agricultural prices, and (3) to finance stabilization corporations or other centralized agencies for marketing agricultural products. It seems probable that the Board used these wide powers as wisely as possible in view of the pressure it was under to stabilize prices and to prevent losses to the farmers. The whole Farm Board plan was economically unsound, however, and it was practically impossible in the circumstances to grant adequately secured loans. The growing severity of the depression increased the difficulties of the Board in this respect, while the temporary success of the stabilization corporations in steadying the prices of wheat and cotton prevented essential reduction in acreage and aggravated the subsequent price declines in these staples, causing huge losses on loans that, even initially, were inadequately secured. It is stated by one

writer that "the ultimate decline in both wheat and cotton caused losses of about \$360,000,000 to the Board."⁴

Assistance of agricultural credit institutions.—Although many of the agricultural credit institutions described earlier in the chapter were soundly operated, the depression in agriculture became so severe that, by 1932, emergency assistance was necessary. The Reconstruction Finance Corporation Act, aside from allocating \$50,000,000 to the Secretary of Agriculture for direct loans to farmers, placed the facilities of the Corporation at the disposal of various types of agricultural credit institutions. Certain other agricultural loans were provided for in the Emergency Relief and Construction Act, and the Reconstruction Finance Corporation was authorized to invest in the capital of regional agricultural credit corporations, the organization of which was provided for if deemed desirable.

Up to the close of 1932, the Reconstruction Finance Corporation had authorized loans of \$29,000,000 to Federal land banks, of which \$18,500,000 was advanced. Loans to joint stock land banks had been authorized in the amount of \$6,297,000, of which \$2,527,845.62 had been advanced by the end of the year. Authorizations to the other types of agricultural credit institutions were in excess of \$20,000,000, a large proportion of which was advanced. The Federal intermediate credit banks, which had not borrowed in 1932, received advances of \$9,250,000 in the first quarter of 1933. In addition to this assistance, the government, in 1932, invested \$125,000,000 in the stock of the Federal land banks.

Unification of agricultural credit agencies.—After the advent of the Roosevelt Administration on March 4, 1933, a very considerable revision, extension, and unification of agricultural credit agencies was accomplished. Space is here lacking to consider in detail the laws and proclamations under which these changes were brought about. It will be desirable, however, to give some attention to the organization of agricultural credit facilities as they were developed under presidential proclamation and the Farm Credits Acts of 1933 and 1935.

⁴ J. Hanna, "The Future of Government Banking," *American Bankers Association Journal*, June 1933, p. 13.

All farm credit facilities in which the federal government has any interest are now under the direction and supervision of the Farm Credit Administration, created by executive order of the President, effective May 27, 1933. "Prior to the establishment of the Farm Credit Administration the credit facilities available for farmers under the auspices of the Federal Government were administered under various authorities. The Federal land banks and the Federal intermediate credit banks were under the supervision of the Federal Farm Loan Board, a division of the Treasury Department. The Federal Farm Board with its funds to loan to cooperative agencies was an independent governmental agency. The regional agricultural credit corporations were organized under the Reconstruction Finance Corporation Act. The crop production and seed loan offices were administered by the Secretary of Agriculture."⁵ Under the circumstances, some centralized control of these various credit facilities was highly necessary and desirable.

New lending agencies.—In addition to the unification of existing agencies under the Farm Credit Administration, two new types of permanent lending agencies were provided for under the Farm Credit Act of 1933. These were production credit corporations and associations and banks for co-operatives. The functions of these two new kinds of agency may be briefly considered.

Production Credit Corporations.—Production credit corporations are not themselves lending institutions. Their chief functions are to assist in organizing, to supervise, and to maintain the capital of production credit associations, to be considered presently.

By the close of 1936, a production credit corporation, of which there are twelve, had been organized in each Federal land bank district. The capital of the corporations, which was originally \$7,500,000 each, is subscribed by the Governor of the Farm Credit Administration from a revolving fund of \$120,000,000, and the capital of each corporation is subject to change by the Governor in accordance with the needs of the corporations in the different districts. On June 30, 1946, the capital of the twelve corporations totaled

⁵ *First Annual Report of the Farm Credit Administration, 1933, p. 3.*

\$101,250,000, having been reduced through the preceding three years from \$120,000,000 through the return of capital to the Treasury by the corporations.⁶

The production credit corporations have their own officers and employees. The directors of the twelve Federal land banks, however, are ex officio directors of the twelve production credit corporations.

Production credit associations.—These associations are corporations chartered by the Governor of the Farm Credit Administration, their organization and management being prescribed by the Governor in their charters and by-laws and in rules and regulations that he issues. Production credit associations are local cooperative organizations of farmers, stockmen, poultrymen, dairymen, and nurserymen who obtain the credit necessary to meet their requirements for current financing from the associations.

An association may be established by ten or more interested farmers to serve the territory in which they live. By the end of 1933, the number of associations organized was 322, the number increasing to 579 at the end of 1934. On June 30, 1946, there were 505 such associations. This decline from 1934 was the result of the liquidation of associations without a sufficient volume of business or their consolidation with other associations. The Farm Credit Administration reported that, at the close of June 1946, every rural county in the United States was served by a production credit association. The area served by one association may be several counties or but part of a county. The average was 5 or 6 counties.

The associations are directed by a board selected by their members from among their number. The farmer-members also select men to serve on an executive committee to pass on loans. Each association also selects a secretary-treasurer, who is the chief officer of the association and is responsible for administering the policies and carrying out the decisions of the board of directors and the executive committee.

The loans made by the associations are for general agricultural purposes and include loans for "planting, cultivation,

⁶ *Thirteenth Annual Report of the Farm Credit Administration, 1946*, p. 40. Unless otherwise noted, factual information in subsequent paragraphs is taken from this or one of the preceding annual reports.

harvesting and marketing of crops; the breeding, raising, fattening and marketing of livestock; the liquidation of indebtedness originally incurred for agricultural purposes; and for alterations, repairs and improvements to farm buildings." Loans may also be obtained for any purpose incidental to these types of farming operations.

Production credit associations obtain funds for lending partly from their cash loan funds, but in much larger part by rediscounting their paper at the Federal intermediate credit banks. Cash loan funds are obtained by direct borrowing from the Federal intermediate credit banks, the loans being secured by pledged bonds. Offerings of loans already closed by an association which are not accepted for rediscount by the Federal intermediate credit bank are carried direct by the association through its cash loan fund.

Production credit associations in the year ended June 30, 1946, made 222,336 loans for \$560,952,188. Of the \$304,170,042 of loans outstanding at the end of that fiscal year, \$256,948,380, or about 84.5 per cent, were rediscounted with the Federal intermediate credit banks. Since the associations rediscount such a large proportion of their loans with the Federal intermediate credit banks, it is essential that a very large share of the loans made should meet the credit standards of the latter institutions. The associations are not allowed to rediscount paper with institutions other than the Federal intermediate credit banks.

The rate of interest that production credit associations may charge borrowers is fixed at not more than 3 per cent above the rediscount rate at the Federal intermediate credit bank. The rate at all the latter institutions in the continental United States during 1945-1946 was $1\frac{1}{2}$ per cent, so that borrowers at production credit associations were accommodated at $4\frac{1}{2}$ per cent rate. As a rule the loans are disbursed to borrowers on a budget plan, the borrower being provided with funds as needed. Since interest is charged only for the time the money is in use, a considerable saving in interest to the borrower may often be effected.

The capital of the production credit associations is not loaned to farmers, but is invested in government obligations or other approved securities. Capital stock of the associa-

tions is of two kinds, Class A, which is non-voting but which has a preferred claim on assets, and Class B, which has voting rights. Class A stock is held largely by the production credit corporations, although available to private investors. Of the \$53,674,414 of Class A stock outstanding on June 30, 1946, all but \$5,736,999 was held by the production credit corporations.

Class B stock must be subscribed to by borrowers from the production credit associations in an amount in fair book value, not to exceed par, of \$5 for each \$100 or fraction thereof borrowed from the association. Each holder of Class B stock has one vote, regardless of the amount of stock held. When a borrower has liquidated his loan, he may transfer his Class B stock to another borrower or to a person who is eligible to become a borrower, or he may exchange it for Class A stock. If he does not borrow from an association for a period of two consecutive years, he must either transfer or exchange his Class B stock.

The production credit associations were designed to replace on a permanent basis the regional agricultural credit associations organized by the Reconstruction Finance Corporation in 1932. As a result, the regional agricultural credit associations are being liquidated in orderly fashion.

Banks for cooperatives.—The Farm Credit Act of 1933 authorized the establishment of another type of permanent lending agency known as banks for cooperatives. During 1933 and the first part of 1934, thirteen of these banks were organized, one in each of the twelve Federal land bank districts and a Central Bank for Cooperatives, located at Washington. In all but one instance the twelve district banks are located in the same city and building as the other permanent lending organizations.

The purpose of the banks for cooperatives is "to provide credit facilities on a sound business basis for cooperative associations in which farmers act together in marketing and processing their farm products and in purchasing, processing and distributing their farm supplies. By the Farm Credit Act of 1935 the banks for cooperatives also were empowered to lend to cooperatives furnishing farm business services." In general, the district banks serve the cooperative agencies located

in their respective districts, while the Central Bank for Cooperatives takes care of the credit needs of associations of national or broad regional scope. An operating capital or facility loan greater than 10 per cent of a district bank's capital and surplus, or a commodity loan greater than 20 per cent of such capital and surplus, is referred to the Cooperative Bank Commissioner for action. In some cases he authorizes the district bank to make the loan; in others it is referred to the Central Bank for Cooperatives for action.

The three classes of loans handled by the banks for cooperatives are commodity loans, operating capital loans and physical facility loans. In general, the commodity loans have the shortest maturity. Operating capital loans have a wide variety of maturities, shorter, however, than those of physical facility loans, which run for from ten to twenty years and are repaid on an amortization basis. Rates charged borrowers vary with the type of loan. During 1946 the rate was $1\frac{1}{2}$ per cent on commodity loans, $2\frac{1}{2}$ per cent on operating capital loans and $3\frac{1}{2}$ per cent on physical facility loans. Total advances made by the twelve district banks and the Central Bank for Cooperatives during fiscal 1946 amounted to \$375,701,733. Outstanding loans at the end of the year totaled \$161,987,567.

The banks for cooperatives obtain their funds for lending purposes in part from their capital and in part by rediscounting with the Federal intermediate credit banks. The preponderant part of the banks' commodity loans are rediscounted, but other types of loan are made out of capital. Originally, the Central Bank for Cooperatives was organized with a capital stock of \$50 million, while each of the district banks had \$5 million capital stock. The stock was subscribed to and paid for by the Governor of the Farm Credit Administration from the revolving fund created under the Agricultural Marketing Act of 1929. The Governor may increase or decrease the capital of the Central or district banks in accordance with the needs of the various institutions.

Borrowers from the banks for cooperatives are required to subscribe to stock in the lending bank in the amount of \$100 for every \$2000 or fraction thereof in the case of operating capital or facility loans and \$100 per \$10,000 in the case of

commodity loans. Where cooperative associations are not permitted by state laws to buy stock, they are required to contribute a similar amount to a guaranty fund held by the bank. Total stock and guaranty fund subscriptions at the end of June 1946 amounted to \$6,482,000.

In addition to funds obtained from capital stock subscriptions and from rediscounting with the Federal intermediate credit banks, the Central Bank for Cooperatives may issue debentures up to five times its paid-in capital and surplus, and may use the funds obtained from their sale in making loans directly or in lending to or rediscounting for the district banks. So far it has not been necessary for the Central Bank to issue debentures to obtain funds for lending.

The directors of each Federal land bank are ex officio directors of the bank for cooperatives of its district and are responsible for its management. The Central Bank for Cooperatives is managed by a board of seven directors, of which the Cooperative Bank Commissioner is chairman. The other six members were originally appointed by the Governor of the Farm Credit Administration with the provision that the successors of the first three so appointed should be chosen from nominees selected by borrowers.

Other lending agencies.—Various other loans of an emergency type are made to farmers, although, with the general improvement in the agricultural situation, the amount of such loans closed is growing smaller. The Emergency Farm Mortgage Act of 1933 made available a fund of \$200 million to the Land Bank Commissioner to grant loans that could not be provided by existing permanent agencies. Subsequently, the Federal Farm Mortgage Corporation, created by act of January 31, 1934, took over this fund together with loans already made as subscription to its capital. The Federal Farm Mortgage Corporation was also authorized to issue bonds up to \$2 billion, guaranteed as to principal and interest by the United States. These bonds might be exchanged for consolidated farm loan bonds as well as sold to furnish added funds for Land Bank Commissioner loans.

Land Bank Commissioner loans may be made on first or second mortgage security, and new loans may be made until February 1, 1940. At times the Land Bank Commissioner

makes first mortgage loans independently of the Federal land banks, but frequently joint loans are made, either on first mortgage security, or the Federal land bank taking a first mortgage and the Land Bank Commissioner a second mortgage on the same property.

The granting of emergency crop and feed loans is also under the direction of the Farm Credit Administration. The amount of such loans granted from 1918 to June 30, 1946, was \$503,217,650. Total payments on principal amounted to \$393,790,360, or 78.3 per cent of the amount loaned. Drought relief loans amounting to \$72,008,540 were made in 1934-1935. On June 30, 1946, principal repayments on these loans had amounted to \$38,816,997, or slightly more than 50 per cent.

Agencies in liquidation.—It has already been noted that the joint stock land banks and the regional agricultural credit corporations were among the agencies that are now being liquidated. The Agricultural Marketing Act Revolving Fund no longer makes new loans, these being cared for by the banks for cooperatives, but at the close of 1939, \$87,-207,043 of loans from this fund to cooperatives were still outstanding and were being serviced.

Farm Credit Administration organization.—The Washington organization of the Farm Credit Administration is shown graphically in Figure 20. At the head of the entire organization is the Governor, who is appointed by the President with the advice and consent of the Senate. Prior to June 24, 1939, the Governor was responsible directly to the President. Since that date he has been responsible to the Secretary of Agriculture instead. In addition to the Governor, there are two Deputy Governors, the Land Bank Commissioner, the Co-operative Bank Commissioner, the Intermediate Credit Commissioner, the Director of Finance and Accounts, the General Counsel, and the Director of Information and Extension.

The various divisions in the Washington office are indicated in Figure 20. Perhaps the four most significant divisions correspond to the four permanent lending agencies. The Land Bank Division, headed by the Land Bank Com-

missioner, is concerned not only with the operation of the twelve Federal land banks, but also with the granting of Land Bank Commissioner Loans. This division also has supervisory authority over the joint stock land banks. The Production Credit Division, under the supervision of the Production Credit Commissioner, covers the operations of

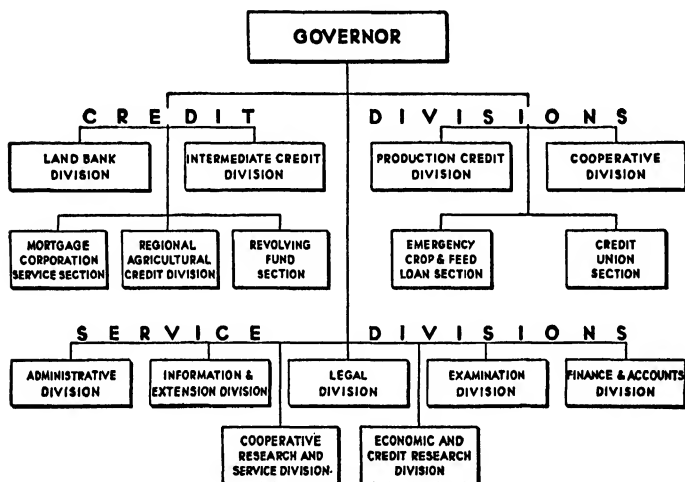


FIG. 20. WASHINGTON ORGANIZATION OF FARM CREDIT ADMINISTRATION

the Production Credit Corporations as well as supervising the emergency crop loan offices. In like manner, the Intermediate Credit Division has charge of the work of the Federal intermediate credit banks and the Cooperative Division supervises the activities of the banks for cooperatives and handles loans made from the Agricultural Marketing Act Revolving Fund. Other divisions of work are indicated in the diagram.

Figure 21, page 846, shows the organization of the Farm Credit Administration in the twelve farm credit districts. Note that one Board of Directors, known as the Farm Credit Board, is responsible for the management of the Federal land bank, the Federal intermediate credit bank, the bank for co-operatives and the production credit corporations of each dis-

trict. The Board consists of seven members, each serving for a three-year term. Three are local directors, three, district directors, and one, a director at large. Of the local directors, one is elected by the production credit association, one by the national farm loan associations and borrowers through agencies, and one by borrowers from the bank for cooperatives. The Governor of the Farm Credit Administration appoints the three district directors—one of whom must be a borrower from the Federal land bank—and the director-at-large.

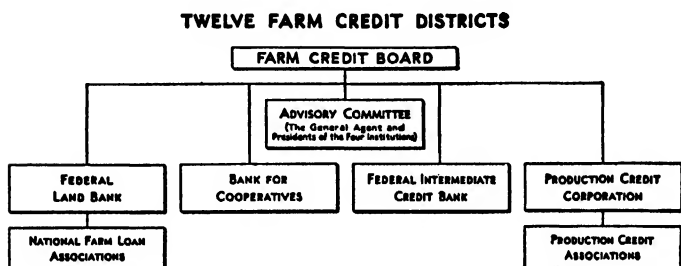


FIG. 21. DISTRICT ORGANIZATION OF FARM CREDIT ADMINISTRATION

The Farm Credit Board also acts as an Advisory Council on matters affecting two or more of the lending agencies. Upon nomination of the Governor of the Farm Credit Administration, the Advisory Council names a General Agent, who is a coordinating officer and contact man between the district organization and the Washington office. As shown in Figure 21, the General Agent, together with the presidents of the four credit agencies, constitutes an Advisory Committee.

Extent of accommodation.—The extent of the accommodation extended by the institutions that come under the supervision of the Farm Credit Administration is shown for the year ended June 30, 1946, and for the period May 1, 1933—June 30, 1946, in the accompanying table. It is impossible to state with any degree of accuracy what proportion of total farm credit has been, and is being, extended by these agencies. A survey of commercial bank loans to farmers as of mid-1947 estimated the agricultural loans of

TABLE 53

FARM CREDIT ADMINISTRATION

Loans made by institutions under the supervision of the Farm Credit Administration from May 1, 1933, through June 30, 1946, and loans outstanding, June 30, 1946

Institution	Loans made May 1, 1933, through June 30, 1946		Loans outstanding June 30, 1946 ¹	
	Number	Amount	Number	Amount
Farm mortgage loans:				
Federal land banks	476,698	\$1,877,837,599	371,635	\$1,007,645,859
Land Bank Commissioner	661,361	1,201,155,293	163,546	174,204,350
Joint stock land banks ²	529	2,479,723	30	130,406
Total	1,138,588	3,081,472,615	535,211	1,181,980,615
Loans to cooperatives:				
Federal intermediate credit banks	(³)	⁴ 177,875,617	(³)	1,184,057
Banks for cooperatives .	14,927	2,260,011,131	⁶ 1,251	114,549,781
Agricultural Marketing Act revolving fund ..	251	⁴ 103,618,979	26	2,687,057
Total	15,178	2,541,505,727	1,277	118,420,895
Other loans and discounts:				
Production credit associations ⁵	⁴ 2,828,627	⁴ 4,522,074,427	196,372	304,173,350
Federal intermediate credit banks (excluding loans to cooperatives)	(³)	⁴ 7,757,920,317	(³)	346,672,648
Emergency crop loans ..	2,532,583	317,229,061	941,871	105,339,701
Drought relief loans (1934-35)	300,614	72,008,540	152,450	31,888,495
Orchard rehabilitation loans	13	17,355	6	5,115
Regional agricultural credit corporations ..	⁴ 232,652	⁴ 549,944,705	6,593	3,819,888
Total	5,894,489	13,219,194,405	1,297,292	791,899,197
Subtotal	7,048,255	18,842,172,747	1,833,780	2,092,300,707
Less Federal intermediate credit bank loans to and discounts for other Farm Credit Administration institutions ..	(³)	⁴ 6,442,071,650	(³)	313,157,326
Net	7,048,255	12,400,101,097	1,833,780	1,779,143,381
Joint stock land bank liquidation fund	20	2,082,679		
Net total	7,048,275	12,402,183,776	1,833,780	1,779,143,381

¹ Includes loans made both prior and subsequent to May 1, 1933.

² Includes data for banks in receivership.

³ Not available.

⁴ Includes renewals.

⁵ Number of cooperative associations having loans outstanding.

⁶ Includes data for associations which have been placed in liquidation.

Source: The 13th Annual Report of the Farm Credit Administration, 1945-46.

commercial banks at \$2.2 billion, of which \$725 million were farm mortgage loans and the rest farm production loans.⁷

It would appear from this survey that the commercial banks are more important than the specialized agencies considered in this chapter as regards farm production credit, whereas the reverse is true with regard to farm mortgage credit. The total amount of farm mortgage credit outstanding is much greater, however, than the total shown in the table plus the amount outstanding at commercial banks. Insurance companies and mutual savings banks hold substantial amounts of farm mortgages and another large but indeterminable amount of such mortgages is held by individuals. Nevertheless, whatever the total of outstanding farm credit may be, the institutions operating under the supervision of the Farm Credit Administration are responsible for an important segment of it, especially in the farm mortgage field.

Conclusion.—There can be little question regarding the desirability of unifying the administration of Federal agricultural credit agencies under the Farm Credit Administration. In the years since its organization in 1933, the Farm Credit Administration has made notable progress in establishing and developing the permanent agencies under its control and in effecting the orderly liquidation of discarded agencies such as the joint stock land banks and the regional agricultural credit corporations. While it may appear that the number of permanent agencies is somewhat excessive, this is not a matter of vital importance so long as the terms upon which credit is extended are in accordance with sound principles of finance. With the exception of certain emergency loans, made under special conditions and not by the permanent agencies, it would appear that the credit extended by the agencies of the Farm Credit Administration has been on a sound basis.

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